TV BOX KM150 (STD/PRO) - ITC GLOBAL MEDIA

USER MANUAL

This manual contains web settings operational guidelines for both Admin and User roles.

If logged in as User and some sections of the menu or parts of dialog boxes are missing, this is because the User privileges are limited to partial access.

Disclaimer: The specifications information and performance of the TVBOX product lines and featured in this publication may be changed without notice. TVBOX manufacturers release new features frequently and subsequently, new features may not be reflected in this manual. The service manual is provided as a reference only. As with any publication, it is subject to errors.

Since the use of this information, and the conditions by which the products are used are beyond the control of TVBOX, it is the obligation of the owner and/or the equipment operator to determine the correct and safe selection and settings and conditions of use of the equipment and products.

Table of Contents

1. Welcome 5
2. Product Overview 6
2.1. What is Included in the Package 6
2.2. Device Controls 6
2.3. Safety Compliances 12
2.4. Warranty 12
3. Product Features 13
3.1. Key Features 13
Features and Capabilities 13
Technical Specifications 14
Software Features 15
3.2. TVBOX KM150 Hardware Specification 16
4. Using TVBOX M50 - Digital Media Center 17
4.1. Getting Familiar with TV/LCD Menu Options 17
4.1.1. Menu Structure 17
4.1.2. Main Menu 18
4.1.3. Video Sub-Menu 19
4.1.4. IP Television (Subscription Required) 20
4.1.5. Pay Per View (Subscription Required) 21
4.1.6. Video On Demand (Subscription Required) 22
4.1.7. User Video 23
4.1.8. Audio Sub-Menu (Subscription Required) 25
4.1.9. Online Radio (Subscription Required) 25
4.1.10. Audio On Demand (Subscription Required) 26
4.1.11. User Audio 28
4.1.12. Telephony Sub-Menu 29
4.1.13. Video/Audio Call (May Require Subscription) 30
4.1.14. History and Media History Service 32
4.1.15. Voice-mail Service 33
4.1.16. SMS Sending (Subscription Required) 34
4.1.17. Information Sub-Menu (Subscription Required) 35
4.1.18. Weather Service (Subscription Required) 36
4.1.19. Currency Exchange Service (Subscription Required) 37
4.1.20. News Service (Subscription Required) 38
4.1.21. Stock Quote Service (Subscription Required) 39
4.1.22. Lucky Numbers Service (Subscription Required) 39
4.1.23. Hotel Management Service (Subscription Required) 40
4.1.24. Communication Sub-Menu (Subscription Required) 41
4.1.25. E-mail Service (Subscription Required) 42
4.1.26. Chat/Messenger Service (Subscription Required) 43
4.1.27. Phone Book Service 44
4.1.28. Virtual Network Console (VNC) Service 44
4.1.29. Web Browser Service (Subscription Required) 45
4.1.30. Services Sub-Menu (Subscription Required) 47
4.1.31. Program Scheduler Service 48

4.1.32. Calculator Service 49
4.1.33. Alarm 50
4.1.34. Wake-Up Call 51
4.1.35. Setup Service 52
4.1.36. Search Service 53
5. Configuration Guide 54
5.1. Configuration with Web Browser 54
5.1.1. Access the Web Configuration Menu 54
5.1.2. User Login Dialog 54
5.1.3. Start Menu 54
5.1.4. System Information Dialog 55
5.1.5. System Configuration Dialog 57
5.1.6. SIP Configuration 59
5.1.7. General PBX Configuration 63
5.1.8. Voice-mail Configuration 64
5.1.9. Voice-mail Messages Administration 65
5.1.10. Call Routing Configuration 66
5.1.11. Phone Book Configuration 68
5.1.12. Phone Book Entry Configuration 68
5.1.13. Distinctive Ring Tone Configuration 69
5.1.14. Call History List 71
5.1.15. Announcement Files Configuration 72
5.1.16. Calling Card Application Mode 72
5.1.17. Global Directory Configuration 73
5.1.18. Auto Attendant/Virtual Configuration 73
5.1.19. Local Media Server 75
5.1.20. Streaming Services 76
5.1.21. User Objects 77
5.1.21a. Play Lists 78
5.1.22. Wireless Services 80
5.1.23. Payment Services 81
5.1.24. Chat/Messenger Services 82
5.1.25. E-mail Services 83
5.1.26. DHCP Server 83
5.1.27. Home Automation 85
5.1.28. Remote Configuration Upgrade 86
5.1.29. Remote Firmware Upgrade 86
5.1.30. Remote Configuration Extract 87
5.1.31. Saving the Configuration Changes 87
5.2. Remote Configuration and Firmware Upgrade 87
5.2.1. Remote Configuration Upgrade 88
5.2.2. Remote Firmware Upgrade 88
5.2.3. Hardware Test Procedure 89

1. Welcome

Thank you for purchasing SysMaster Corporation award-winning TVBOX KM150 Digital Media Center. You made an excellent choice and we hope you will enjoy all its capabilities. TVBOX KM150 Digital Media Center is the innovative Digital Media Center that offer a rich set of IPTV, Video Conferencing, and Telephony functionalities and superb sound quality. They are fully compatible with SIP industry standard and can interoperate with many other SIP compliant devices and software on the market.

For more information about the company, please visit us at: www.sysmaster.com

2. Product Overview

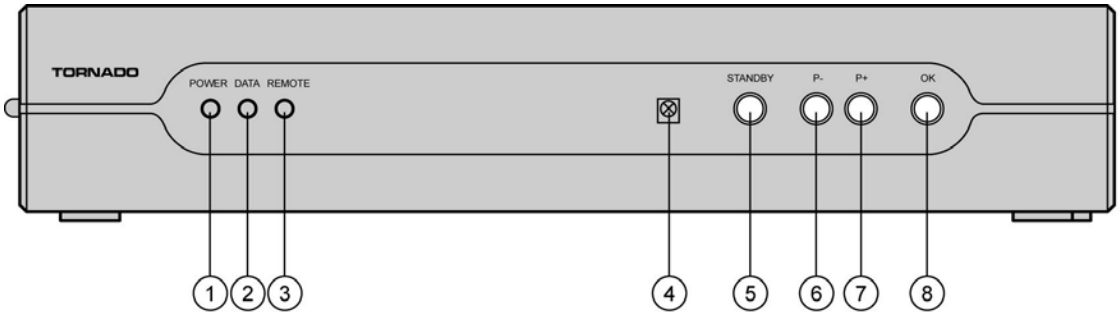
2.1. What is Included in the Package

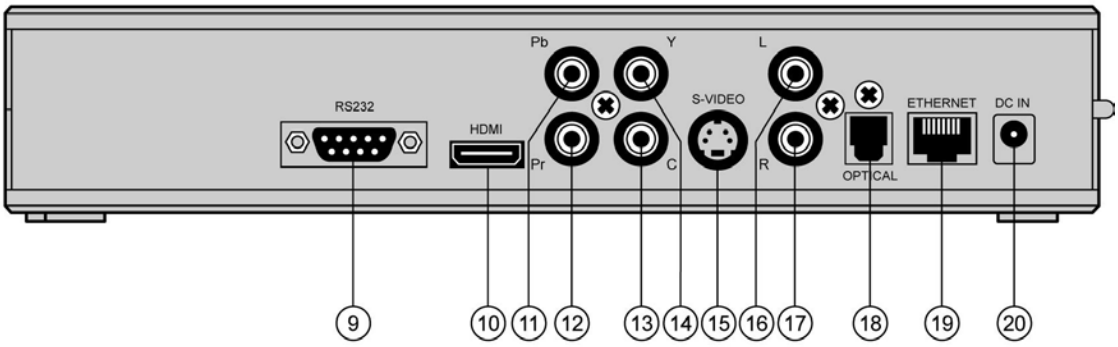
The TVBOX KM150 Set Top Box (STB) package contains:

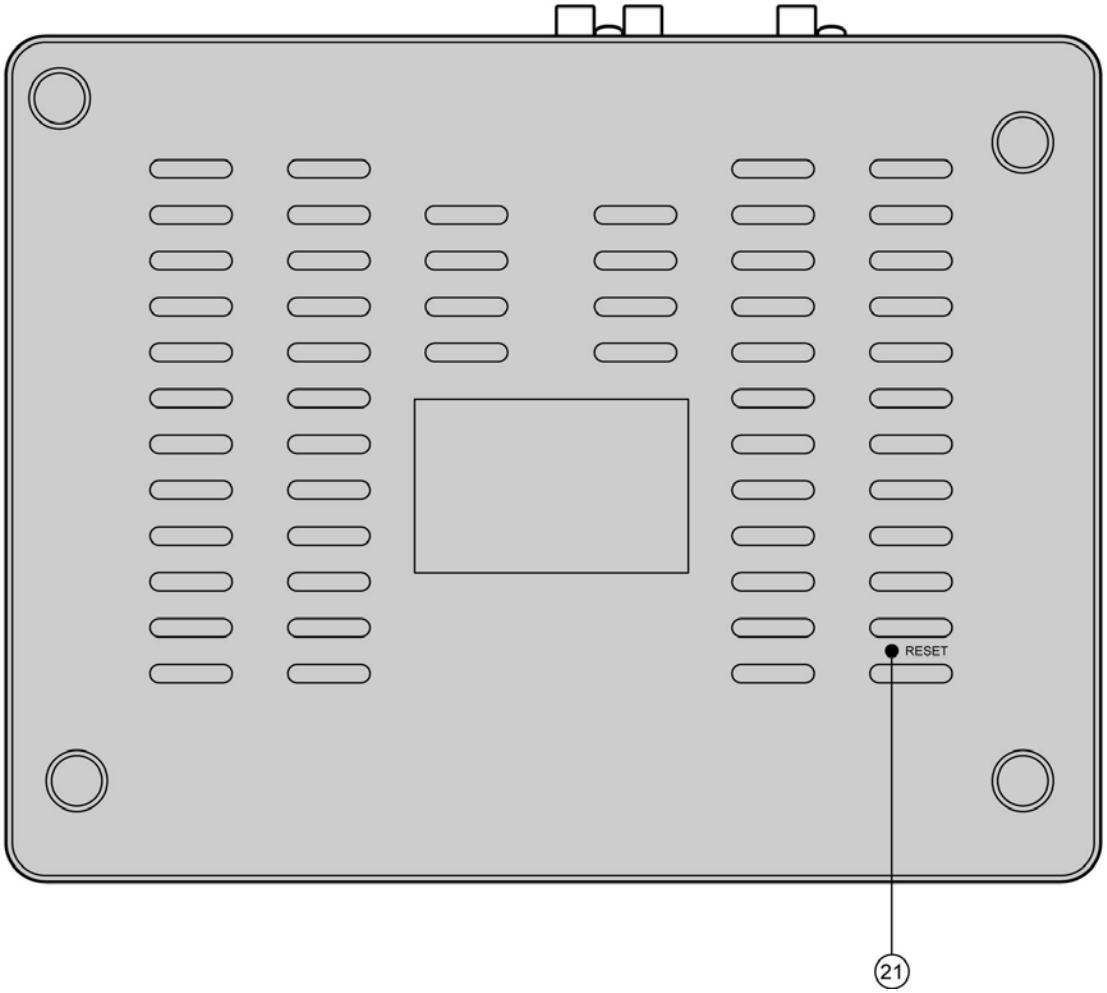
1. One TVBOX KM150 STB Device
2. One Audio and Video Cable
3. One Advanced Infra Red Remote Control
4. One Universal Power Adaptor
5. One Ethernet Cable
6. User Manual

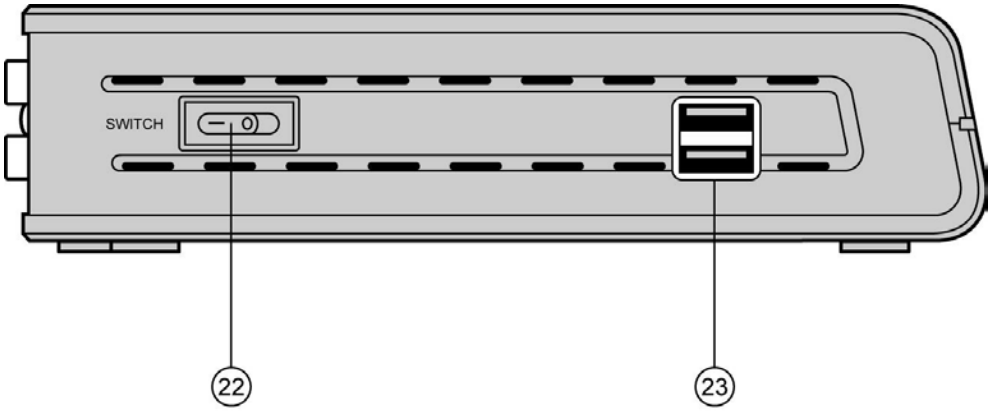
2.2. Device Controls

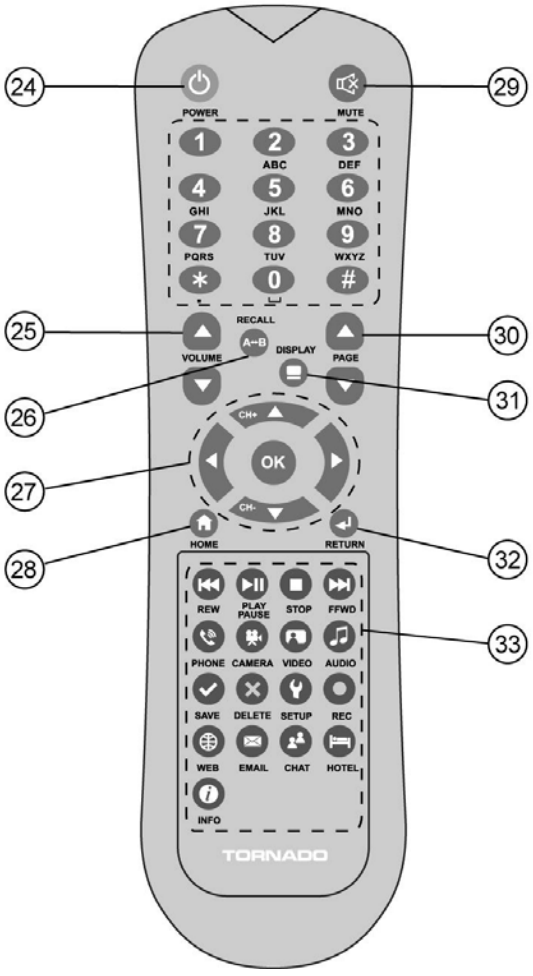
TVBOX KM150 STB - Digital Media Center


TORNADO
POWER
DATA
REMOTE
STANDBY
P-
P+
OK
1
2
3
4
5
6
7
8


RS232
HDMI
Pb
Y
L
Pr
C
S-VIDEO
R
OPTICAL
ETHERNET
DC IN
9
10
11
12
13
14
15
16
17
18
19
20

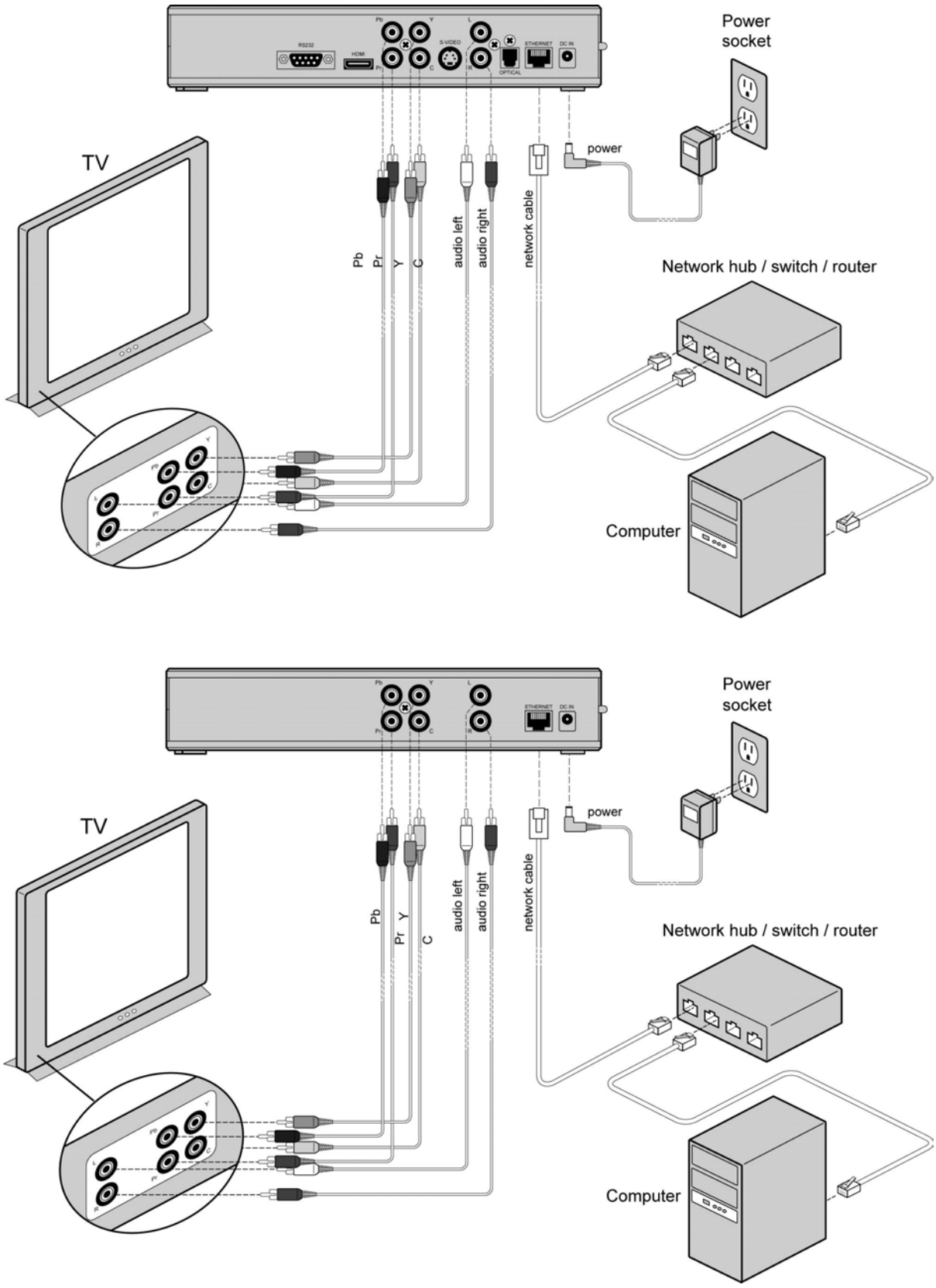

RESET
21


SWITCH
22
23


24
29
POWER
MUTE
1
2
ABC
3
DEF
4
GHI
5
JKL
6
MNO
7
PQRS
8
TUV
9
WXYZ
*
0
#
25
RECALL
A↔B
VOLUME
30
DISPLAY
PAGE
26
31
CH+
OK
27
CH-
28
HOME
RETURN
32
REW
PLAY PAUSE
STOP
FFWD
33
PHONE
CAMERA
VIDEO
AUDIO
SAVE
DELETE
SETUP
REC
WEB
EMAIL
CHAT
HOTEL
INFO
TORNADO

Element	Description
1	Power LED Indicator
2	Data LED Indicator
3	Remote LED Indicator
4	Remote Control Sensor
5	Standby Button
6	Page Up button
7	Page Down button
8	Select Button
9	RS 232 serial port (TVBOX KM150 Plus)
10	HDMI Output (TVBOX KM150 Plus)
11	Component Video Output Pb
12	Component Video Output Pr
13	Composite Video Output C
14	Component Video Output Y
15	S-Video Output (TVBOX KM150 Plus)
16	Audio output Left Channel
17	Audio output Right Channel
18	SPDIF Digital Optical Audio Output (TVBOX KM150 Plus)
19	100/10Mbit Ethernet Port
20	DC Power input
21	Reset Button
22	Power ON/OFF Switch
23	Two USB 2.0 Ports (TVBOX KM150 Plus)
24	Power ON/OFF Button
25	Volume Up/Down Buttons
26	Recall – returns to the previously selected channel
27	Navigational Buttons
28	Home Button – returns to the main page
29	Mute Button
30	Page Up/Down Buttons – scrolls the channel guide one page at a time
31	Display Button - opens the property for the selected channels and displays the bitrate
32	Return Button – returns one level back in the menu
33	Various Shortcut buttons

Connecting TVBOX and KM150 Plus STB



Connecting KM150

Video:
The KM150 provides the following video outputs:
- Component Video (Y, Pr, Pb) which can be used for analog High Definition or best quality Standard Definition.
- Composite Video (CVBS) which can be used for standard picture quality
With either Video connection the audio outputs must be connected separately.

Audio:
The KM150 provides the following audio outputs:
- Left and right audio for stereo sound
Please refer to the above diagram for detail information on connecting the cables.

Connecting KM150 Plus

Video:
TVBOX KM150 Plus provides the following video outputs:
- Component Video (Y, Pr, Pb) which can be used for analog High Definition or best quality Standard Definition.
- Composite Video (CVBS) which can be used for standard picture quality.
- HDMI which is used for digital High Definition quality.
- S-Video for good picture quality.
With either Video connection the audio outputs must be connected separately.

Audio:
TVBOX KM150 Plus provides the following audio outputs:
- Left and right audio for stereo sound.
-S/P DIF (optical) digital output for best quality surround sound.
Please refer to the above diagram for detail information on connecting the cables.

2.3. Safety Compliances

The TVBOX KM150 Digital Media Center is compliant with various safety standards including FCC/CE. Its power adaptor is compliant with UL standard. The device should only be operated with the universal power adaptor provided with the package. Damages to the device caused by using other unsupported power adaptors are not covered by the manufacturer's warranty.

2.4. Warranty

SysMaster Corporation has a reseller agreement with its reseller customer. End-users should contact the service provider or distributor selling the product for replacement, repair or refund.

If you purchased the product directly from SysMaster Corporation, contact your SysMaster Corporation Sales and Service Representative for a RMA (Return Materials Authorization) number.

SysMaster Corporation reserves the right to remedy warranty policy without prior notification.

3. Product Features

3.1. Key Features

SysMaster Corporation TVBOX KM150 Digital Media Center is a next generation consumer IP device system based on industry open standard SIP (Session Initiation Protocol). Built on innovative technology, SysMaster Corporation Digital Media Center features market leading superb sound quality and rich functionalities at mass-affordable price.

(**(Depending on the model of TVBOX KM150 purchased, some features/functions may not be available. In addition, some features and services require subscription on an IPTV Platform **)**

Features and Capabilities

Video and Audio Features

- IPTV Streaming - **
- Content Distribution via HTTP/TCP Unicast
- Content Distribution via UDP Unicast and/or Multicast
- Video on Demand (VOD) Support - **
- Pay-per-View (PPV) Support - **
- Trick Play Support (Pause, Replay, Rewind, etc.)
- Digital Audio Streaming (Online Radio) - **
- Picture Slide Show - **
- Parental Control
- Content Library Support for Remote PC
- Low Bit Rates Support
- Personal Video Recorder (PVR)
- Time Scheduling of the PVR

Online Services Capabilities

- Interface to Local PC Content
- Chat Client compatible with ICQ, AOL, MSN - **
- E-mail Reader - **
- News Reader - **
- Weather Interface - **
- Calculator - **
- Currency Converter - **

VoIP Telephony (Depending on the model of TVBOX KM150 purchased, the VoIP Telephony feature may not be available.)

- SIP Protocol with NAT Traversal
- Video Conferencing Support
- Peer Auto Discovery
- Four (4) Line Rollover for Inbound/Outbound Calls

- Advanced PBX Features
- Call Waiting, Call Forward, Call Hunting
- Automated Call Forwarding to Multiple Numbers
- Advanced IVR Support and Management
- Auto Attendant Support
- Voice Encryption
- Wake-Up Phone Service

Web Interface

- Advanced System Management
- Voice-mail Retrieval
- Phone Book
- Advanced Feature Management
- Customizable IVR Response Management
- Call History Lists
- User/Administrator System Views

Voice-mail (Depending on the model of TVBOX KM150 purchased, the Voice-mail feature may not be available.)

- Up to 80 Voice-mail Messages
- Remote Voice-mail Retrieval via Phone or Web
- Advanced Voice-mail Management
- Voice-mail-to-E-mail Support
- Unified Messaging

Technical Specifications

Connectors

- One Ethernet (RJ-45)
- Two USB ports (KM150 Plus)
- One Video RCA Analog Port
- One Stereo Audio RCA Analog Port
- One HDMI Port (KM150 Plus)
- One SP/DIF Audio port
- One S-Video port (KM150 Plus)
- One Component output
- One Serial Port (KM150 Plus)
- Infrared (IR) Remote Control Interface

Codecs

- MPEG4, H264, MPEG2, WMV, DiVX, ASF, AVI, Video
- MP3 Audio
- AAC Audio
- G.711 A-law / μ-law (56 & 64 kbps)

- G.711 Annex I

- G.726-32
- Echo Canceller (G.165 / G.168)
- Advanced Dynamic Jitter Control
- Voice Activity Detection (VAD)
- DTMF Detection and Generation
- Fax/Modem Pass-Through (G.711)

Protocols

- SIP
- H.264
- MPEG2
- MPEG4
- WMV
- DHCP
- NTP
- DNS
- RTP / RTCP / SRTP
- HTTP
- UDP/TCP
- SDP
- SMTP
- PPPoE

Device Provisioning

- Via Central Content Management System
- Caller ID Number Assignment - **
- User/Admin Interface
- PPPoE
- Web Interface

Software Features

- Support MPEG4, H264 MP3, AAC and other decoding standards..
- Support advanced audio and video processing including IPTV, Pay-per-View, Video on Demand, Online Radio, Audio-on-Demand - **.
- Support SIP 2.0, TCP/UDP/IP, RTP/RTCP, HTTP, ARP/RARP, ICMP, DNS, DHCP, NTP/SNTP, TFTP, SIMPLE/PRESENCE protocols.
- Support up to 4 SIP channels concurrently.
- Support multiparty conferencing and 3-way calling. **
- Support NAT traversal.
- Advanced Digital Signal Processing (DSP) technology to ensure superior hi-fidelity audio quality, interoperable with various 3rd party SIP end user device, Proxy/Registrar/Server and Gateway products.
- Advanced adaptive jitter buffer control, packet delay and loss concealment technology.

- Support popular codecs including G711 (a-law and u-law), G.726.
- Dynamic negotiation of codec and voice payload length.
- Support voice features such as Caller ID Display or Block, Call Waiting, Call Waiting. Caller ID, Call Hold, Call Transfer (attended/blind), Do-Not-Disturb, Automated Call Forwarding. **
- Call Forwarding, in-band and out-of-band DTMF (RFC2833), SIP INFO, Dial Plans, Auto Dial, Auto Answer, 100 Speed Dial capacity. **
- Supports advanced Voice e-mail functionality to allow custom voice e-mail services and capacity for over 80 voice e-mail messages. **
- Supports Unified Messaging including Voice e-mail-to-E-mail, E-mail notifications, Remote Voice e-mail retrieval via Web and Device. **
- Supports redial, call log, volume control, voice mail with indicator, customizable downloadable ring tone, etc. **
- Support Silence Suppression, VAD (Voice Activity Detection), CNG (Comfort Noise Generation), Line Echo Cancellation (G.168) and AGC (Automatic Gain Control). **
- Support basic and MD5 encrypted authentication.
- Support Voice Encryption with other TVBOX devices. **
- Provide easy configuration through manual operation (device keypad) and Web.
- Supports interface for automated provisioning by downloading encrypted configuration file via HTTP for mass deployment.
- Support for Layer 2 (802.1Q VLAN, 802.1p) and Layer 3 QoS (ToS).
- Support firmware upgrade via HTTP.
- Support DNS SRV Look-up and SIP Server Fail Over.

3.2. TVBOX KM150 Hardware Specification

Reference:	TVBOX KM150
LAN Interface	1 10/100 port
FXO Interface	N/A
FXS Interface	N/A
Optional 3 FXO Interfaces	N/A
USB 2.0 Interface	Selected models
Video Camera	Optional
SD Card Interface	N/A
Stereo Audio Port	Standard
Video Port	Standard
WiFi/Wireless Interface	Optional
Infra Red Interface	Standard
LCD	Selected models
Universal Switching Power Adaptor	Standard
Dimension	
Weight	
Temperature	
Humidity	
Compliance	FCC, CE, ROHS, UL

4. Using TVBOX KM150 - Digital Media Center

4.1. Getting Familiar with TV/LCD Menu Options

TVBOX KM150 device includes advanced display functionally to allow dynamic and easy device management. The KM150 STB must be connected to a television or to a monitor with RCA video and audio input connectors. On the remote control, select the "Video" button and hold it for a few seconds to activate the menu screen:

4.1.1. Menu Structure

TVBOX KM150 Digital Media Center features a tree-like, multi-level menu hierarchy to allow easy menu navigation and access. The table below represents the menu structure:

Main Menu	Sub-Menu	Function	Function ID
Video	**Video**	IP Television	1
		Pay Per View	2
		Video On	3
		User Video	4
		Video Categories	5
		Picture Browser	6
		Exit	7
Audio	**Audio**	Online Radio	10
		Audio On Demand	11
		User Audio	12
		Exit	13
Telephony	**Telephony**	Video/Audio Call	20
		History	21
		Voice-mail	22
		Send SMS	23
		Exit	24
Information	**Information**	Weather	30
		Currency	31
		News	32
		Stock Quotes	33
		Lucky Numbers*	x
		Hotel Management	
		Help	34
		Exit	35
Communication	**Communication**	E-mail	40
		Chat/Messenger	41
		Phone Book	42
		Virtual Terminal	43
		Web Browser	x
		Exit	44

Services	**Services**	Program Scheduler	50
		Calculator	51
		Alarm	52
		Wake-Up Call	53
		Setup	54
		Search	55
		Exit	56

4.1.2. Main Menu

Upon start-up of the KM150 device, the main menu will display. The menu will allow users to navigate and select sub-menu functions. To enter one of the listed sub-menu options, users must use the "UP/DOWN" buttons of the navigator. Once the desired selection is high-lighted, the users must press "OK" button to execute the command. The navigator buttons can be found on the remote control for the TVBOX KM150 "Hot-Keys" are available to allow easy access of commonly used functions.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.

4.1.3. Video Sub-Menu

TVBOX KM150 supports advanced video options to allow users to watch IP Television, Video-on-Demand, Pay-per-View, and User Video provided content. It is necessary to be a registered user with a subscription on an IPTV platform to access such services.

Upon selecting the Video option from the main menu, a sub-menu is entered once the user presses the "Video" button on the remote control for the TVBOX KM150 STB. To return to the Main Menu the users must select the "Exit" option from the sub-menu.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu

4.1.4. IP Television (Subscription Required)

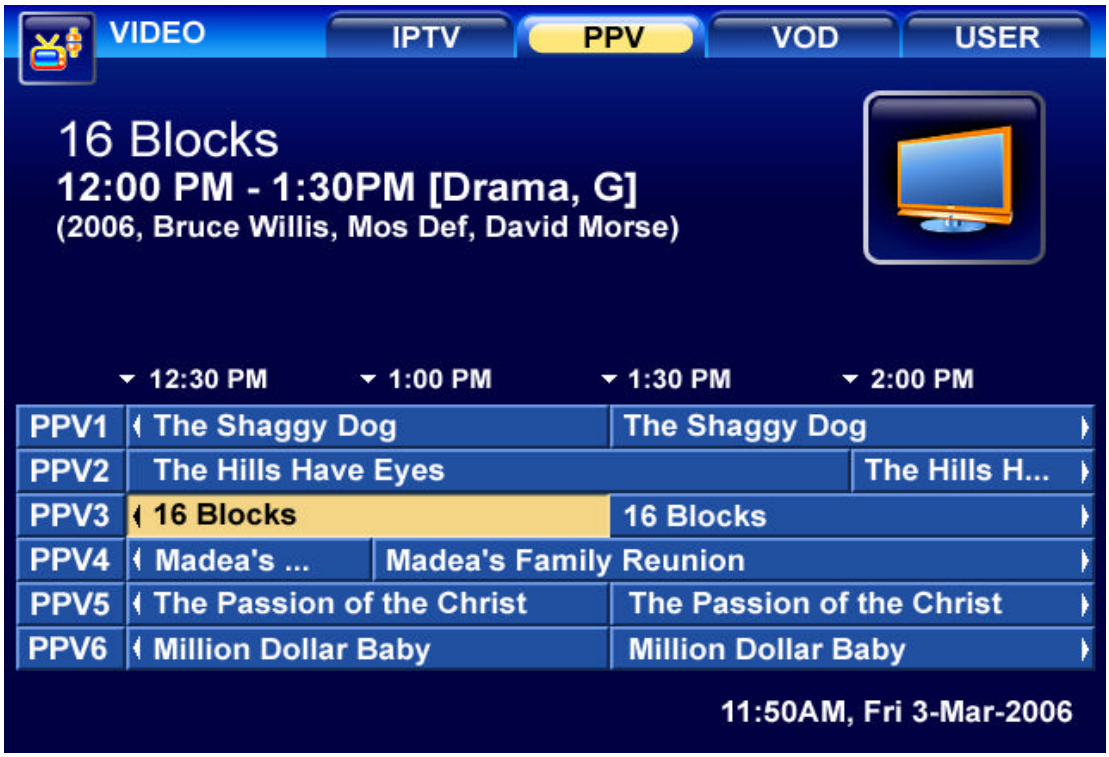
The IP Television function allows the users to watch online IPTV streaming video content. Once selected, the function will connect to the remote server and retrieve the media content. The system will display detailed channel information including name, index, time, rating, artist, and cost information. If the selected channel requires payment the system will prompt the users to confirm the selection.

Button	Function
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file in BUFFERED mode
STOP	Stops paying the selected channel/file
PAUSE	Pauses the playing of the channel/file
DISPLAY	Switches On/Off Information display mode
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
MON	Switches between digital ZOOM modes. 1x, 2x, 4x

BOOK	Makes the selected channel Favorite
HIST	Jumps to the last viewed channel.
>> Forward	Forward scroll of the EPG guide to the selected channel.
<< Backward	Backward scroll of the EPG guide for the selected channel. Allows viewing of historical content (if supported by the system).
FLASH	Switches to the Setup Menu.
VIDEO	Switches to the Video content and retrieves the newest channel EPG.

4.1.5. Pay Per View (Subscription Required)

The Pay per View function allows the users to watch online Video streaming content. Once selected the function will connect to the remote server and retrieve the media content. The system will display detailed channel information including name, index, time, rating, artist, and cost information. If the selected channel requires payment the system will prompt the users to confirm the selection.



Button	**Function**
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file in BUFFERED mode
STOP	Stops paying the selected channel/file
PAUSE	Pauses the playing of the channel/file

DISPLAY	Switches On/Off Information display mode
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
MON	Switches between digital ZOOM modes. 1x, 2x, 4x
BOOK	Makes the selected channel Favorite
HIST	Jumps to the last viewed channel.
>> Forward	Forward scroll of the EPG guide to the selected channel.
<< Backward	Backward scroll of the EPG guide for the selected channel. Allows viewing of historical content (if supported by the system).
SETUP	Switches to the Setup Menu.
VIDEO	Switches to the Vide content and retrieves the newest channel EPG.

4.1.6. Video On Demand (Subscription Required)

The Video On Demand function allows the users to watch online Video streaming content. Once selected the function will connect to the remote server and retrieve the data content. The system will display detailed channel information including name, index, time, rating, artist, and cost information. If the selected channel requires payment the system will prompt the users to confirm the selection.

VIDEO
IPTV
PPV
VOD
USER
Notting Hill
Cost: 2 USD
[Romance, Rated PG-13]
(1999, Julia Roberts, Hugh Grant)
Index Name Time Cost
181 Notting Hill (1999) 1h 30m 2 USD
182 Die Hard 2 (1990) 1h 35m 1.50 USD
183 Ocean's Eleven (2001) 1h 40m 2 USD
184 Rush Hour (1998) 1h 40m 3 USD
185 Shanghai Knights (2003) 2h 00m 2 USD
186 Bruce Almighty (2003) 1h 40m 1.50 USD
11:50AM, Fri 3-Mar-2006

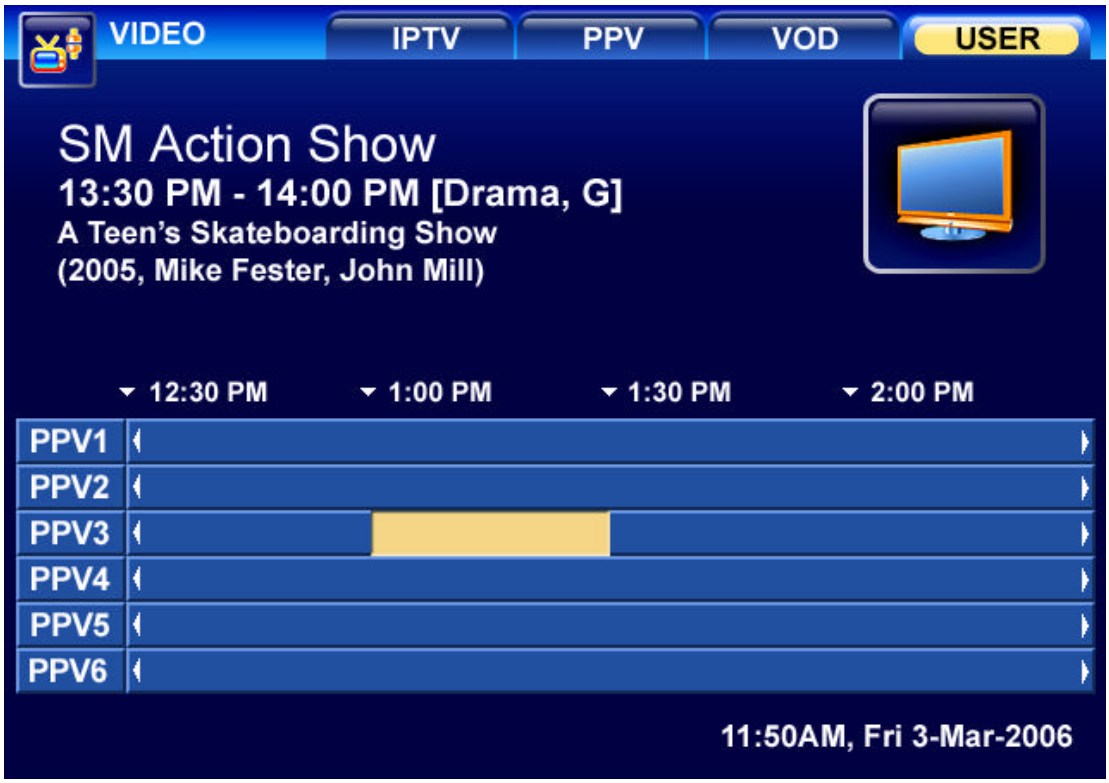
Button	**Function**
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel

Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file in BUFFERED mode.
STOP	Stops paying the selected channel/file
FORWARD >>	Forwards the channel/file (if possible)
BACKWARD <<	Backwards the channel/file (if possible)
PAUSE	Pauses the playing of the channel/file
DISPLAY	Switches On/Off Information display mode
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
MON	Switches between digital ZOOM modes. 1x, 2x, 4x
BOOK	Makes the selected channel Favorite channel.
HIST	Jumps to the last viewed channel.
FLASH	Switches to the Setup Menu.
VIDEO	Switches to the Vide content and retrieves the newest channel EPG.

In some cases, the Video on Demand and Pay per View content will require payment and the subscribers will be prompted to confirm the payment prior to receiving the Video stream.

4.1.7. User Video

The User Video function allows the users to watch Video streaming content over a Local Area Network (LAN). The device will scan for open shared directories and locate compatible file types (AVI, MP3) that can be played. Once selected the function will connect to the remote server and retrieve the media content. The system will display detailed channel information including name, file type and file size information.



Button	Function
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file
STOP	Stops paying the selected channel/file
FORWARD >>	Forwards the channel/file (if possible)
BACKWARD <<	Backwards the channel/file (if possible)
PAUSE	Pauses the playing of the channel/file
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
FUNC	Switches to the Main menu
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
BOOK	Makes the selected channel Favorite channel.

4.1.8. Audio Sub-Menu (Subscription Required)

TVBOX KM150 supports advanced audio options to allow users to listen to Online Radio streams, Audio on Demand streams, and User provided content. It is necessary to be registered user with a subscription on an IPTV platform to access such services.

Upon selecting the Audio option from the main menu, a sub-menu is entered once the user presses the "Audio" button on the remote control for the TVBOX KM150 STB. To return to the Main Menu, users must select the "Exit" option from the sub-menu.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu

4.1.9. Online Radio (Subscription Required)

The Online Radio function allows the users to listen to online streaming Audio content. Once selected the function will connect to the remote server and retrieve the media content. The system will display detailed channel information including name, index, time, rating, artist, and cost information. If the selected channel requires payment the system will prompt the users to confirm the selection.

Button	Function
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file
STOP	Stops paying the selected channel/file
FORWARD >>	Forwards the channel/file (if possible)
BACKWARD <<	Backwards the channel/file (if possible)
PAUSE	Pauses the playing of the channel/file
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
FUNC	Switches to the Main menu
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
BOOK	Makes the selected channel Favorite channel.

4.1.10. Audio On Demand (Subscription Required)

The Audio On Demand function allows the users to listen to online streaming Audio content. Once selected the function will connect to the remote server and retrieve the media content. The system will display

detailed channel information including name, index, time, rating, artist, and cost information. If the selected channel requires payment the system will prompt the users to confirm the selection.

Button	Function
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file
STOP	Stops paying the selected channel/file
FORWARD >>	Forwards the channel/file (if possible)
BACKWARD <<	Backwards the channel/file (if possible)
PAUSE	Pauses the playing of the channel/file
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
FUNC	Switches to the Main menu
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
BOOK	Makes the selected channel Favorite channel.

4.1.11. User Audio

The User Audio function allows the users to listen to Audio streaming content over a Local Area Network (LAN). The device will scan for open shared directories and locate compatible file types (MP3) that can be played. Once selected the function will connect to the remote server and retrieve the media content. The system will display detailed channel information including name, file type and size information.

Button	Function
Navigator-UP	Switches to the UP channel
Navigator-DOWN	Switches to the DOWN channel
Navigator-LEFT	Moves Left across Folder selection
Navigator-RIGHT	Moves Right across Folder selection
Channel-UP	Moves one page UP (one page has 6 channels)
Channel-DOWN	Moves one page DOWN (one page has 6 channels)
Navigator-OK	Selects and plays channel/file
PLAY	Plays the selected channel/file
STOP	Stops paying the selected channel/file
FORWARD >>	Forwards the channel/file (if possible)
BACKWARD <<	Backwards the channel/file (if possible)
PAUSE	Pauses the playing of the channel/file
MUTE	Mutes the audio output
VOLUME +/-	Increases/Decreases the volume
FOLDR	Switches On/Off folder selection
FUNC	Switches to the Main menu
SAVE	Initiates channel/file recording (if configured)
DEL	Switches On/Off Parental Lock. Requires password.
BOOK	Makes the selected channel Favorite channel.

4.1.12. Telephony Sub-Menu

Depending on the model of TVBOX KM150 purchased, the Telephony menu may not apply. The TVBOX KM150 can support advanced Telephony options to allow users to make Audio and Video calls, listen to Voic e-mail, or Send SMS messages (requires service activation). The sub-menu is entered after the users select the Telephony option from the main menu or once they press the "Phone" button on the remote control of the TVBOX KM150. To return to the Main Menu, users must select "Exit" from the sub-menu.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu

4.1.13. Video/Audio Call (May Require Subscription)

Depending on the model of TVBOX KM150 purchased, Video/Audio Calls service may not apply. The Video/Audio Call function allows the users to initiate and accept Audio and Video calls. The device supports up to 4 active calls and allows advanced Centrex/PBX functions such as Call on Hold, Call Transfer, Call Forwarding, Conference Calling, Message Wait Indicator, Voic e-mail.

The function allows the users to interactively manage all inbound and outbound phone calls. The system will display detailed telephony channel information including Caller ID, Caller Name, Call State (such as Ringing (R:), Talking (T:), Call On Hold (H:), Voic e-mail (M:), Calling Card IVR (I:), Virtual Office Auto Attendant (O:)) information. The device also allows easy access to other common functions such as Ringer control, Voic e-mail access, Message Wait Indicator management, Call History management, Do-Not-Disturb management, and Phone Book management.

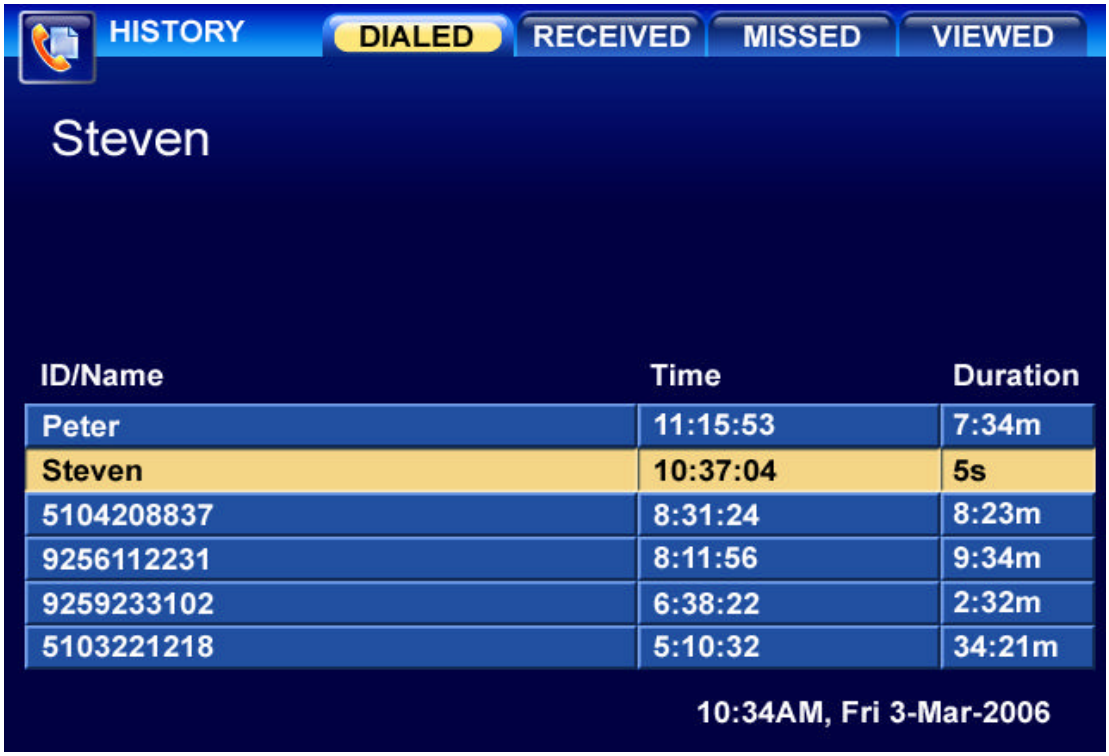
Button	Function
Navigator-UP	Switches to the UP phone line.
Navigator-DOWN	Switches to the DOWN phone line.
Navigator-Left	Moves Left across Function selection.
Navigator-Right	Moves Right across Function selection.
Navigator-OK	Opens the phone line and dials the number. If there is no entered number, switches to the Phone Book.
0-9 Buttons	Enters the digits of the phone number.
Display/DISP	Switches On/Off Information display mode. In Video Conference mode allows digital Zoom 1x, 2x, and 4x.
Video/MON	Initiates a Video call. The number should be dialed in advance. Video calls can not be initiated after the phone line is picked up. To switch from Video to Voice call, press the button again. To drop the call, press the

	Speaker/Phone button.
Speaker/PHONE	Initiates a Voice call. If the number is not dialed in advance will play a dial tone. To drop the call, press the button again. Voice calls can not be switched to Video unless they have been initiated as Video calls with the Video/Mon button.
Mute	Mutes the audio input.
Volume +/UP	Increases the volume
Volume -/DOWN	Decreases the volume
CONF	Places all phone lines in a conference mode
FLASH	Puts the current line on Hold and opens the next phone line. Used to switch between lines.
BOOK	Opens the phone book to allow number selection.
DEL/DELETE	Drops the selected phone line.
Func Key	Switches to the upper menu.

Call State Indicator	**Description**
R	The line is ringing.
T	The line is in active call. Subscribers are talking.
H	The line is on hold. To pick up the call, select the line and press “OK”.
M	The line is in Voice-mail IVR auto attendant. To pick up the call, select the line and press “OK”.
I	The line is in Calling Card IVR auto attendant. To pick up the call, select the line and press “OK”.
0	The line is in Virtual Office IVR auto attendant. To pick up the call, select the line and press “OK”.
RV	There is in incoming Video call. To accept the call the subscriber must press Video or MON.

4.1.14. History and Media History Service

Depending on the model of TVBOX KM150 purchased, some History settings may not apply. The History Screen function allows the users to check on all passed call events. The device displays all Missed, Dialed, Received calls as well as the full History of all Viewed Media channels. The History function is directly interfaced with the Phone Book function to allow easy storage for all numbers that the user need to access. The History information is reset upon restarting the device.



Button	Function
Navigator-UP	Switches to the UP record.
Navigator-DOWN	Switches to the DOWN record.
Navigator-Left	Moves Left across Function TAB selection.
Navigator-Right	Moves Right across Function TAB selection.
Navigator-OK	Opens the record to allow Phone Book entry.
DEL	Deletes a single entry or all entries from the list.
SAVE	Saves the entry to the Phone Book.
Func Key	Switches to the upper menu.

4.1.15. Voice-mail Service

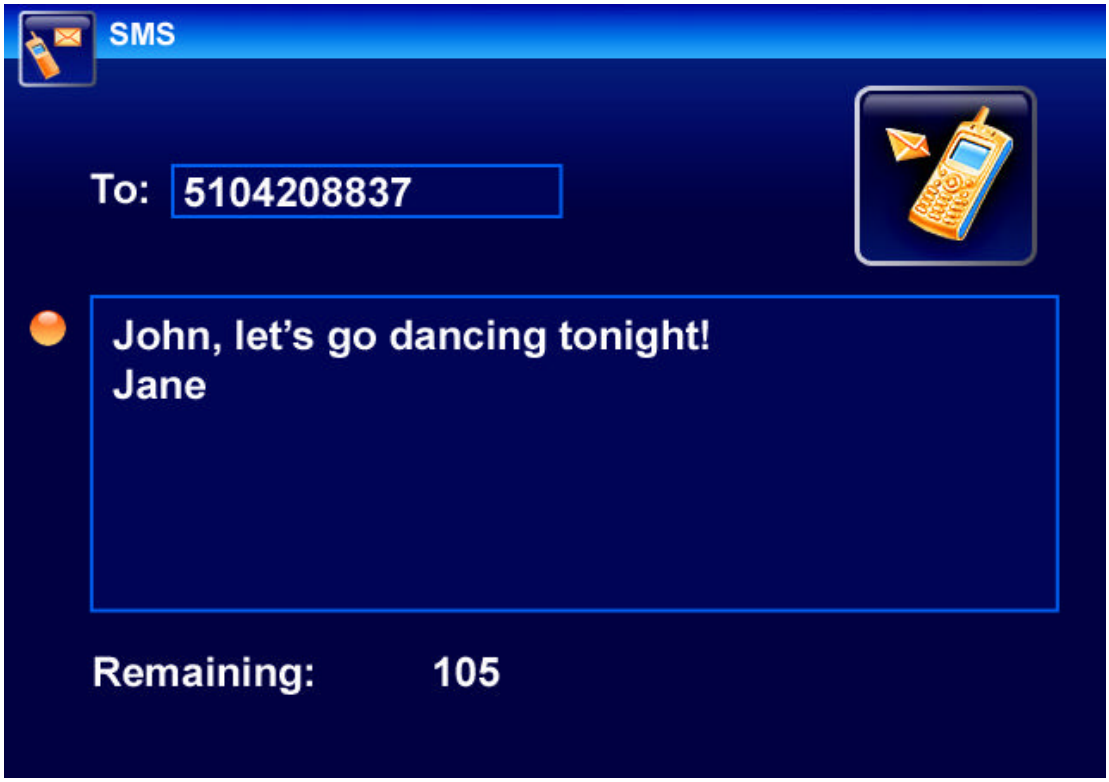
Depending on the model of TVBOX KM150 purchased, Voice-mail service may not apply. The Voice-mail function allows the users to check on all received voice-mails. The device displays all voice-mail time and caller id information. The users can listen directly to their voice-mails utilizing the TV and the remote control or access the Voice-mail function via the phone IVR. The Voice-mail information is not reset upon restarting the device.

To enter the Voice-mail function, the subscriber must first input a valid Voice-mail password.

Button	Function
Navigator-UP	Switches to the UP Voice-mail and plays it.
Navigator-DOWN	Switches to the DOWN Voice-mail and plays it.
Navigator-OK	Plays the Voice-mail message.
DEL	Deletes a single entry or all entries from the list.
Func or Menu	Switches to the upper menu.

4.1.16. SMS Sending (Subscription Required)

The SMS sending function allows the users to send SMS messages using their TV and remote control. In order to send SMS messages, the users must enter The SMS number and the SMS text. Once submitted for processing the SMS message can not re stopped or delayed. The maximum length of the SMS message is 255 characters.



Button	Function
Navigator-UP	Switches to the UP "To:" entry.
Navigator-DOWN	Switches to the DOWN "Text:" entry.
Navigator-Left	Deletes one character to the left.
Navigator-OK	Sends the SMS message.
0-9 Buttons	Enters the alpha numeric digits of the message. To enter alpha characters, please press multiple times the 0-9 buttons. For example, to enter "A" press the "2" twice.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

4.1.17. Information Sub-Menu (Subscription Required)

TVBOX KM150 supports advanced Information options to allow users to receive valuable online information such as Weather, Currency Exchange, News, and Stock Quotes information. The sub-menu is entered after the user selects the Information option from the main menu. To return to the Main Menu, users must select "Exit" from the sub-menu.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu.

4.1.18. Weather Service (Subscription Required)

The Weather function allows the users to receive the most current weather conditions in their area and check on future weather conditions. The Weather information is refreshed once every 30 minutes but its accuracy depends on the proper user localization and the data feed associated with the service. This is informational service only.

Button	Function
Func Key	Switches to the upper menu.

4.1.19. Currency Exchange Service (Subscription Required)

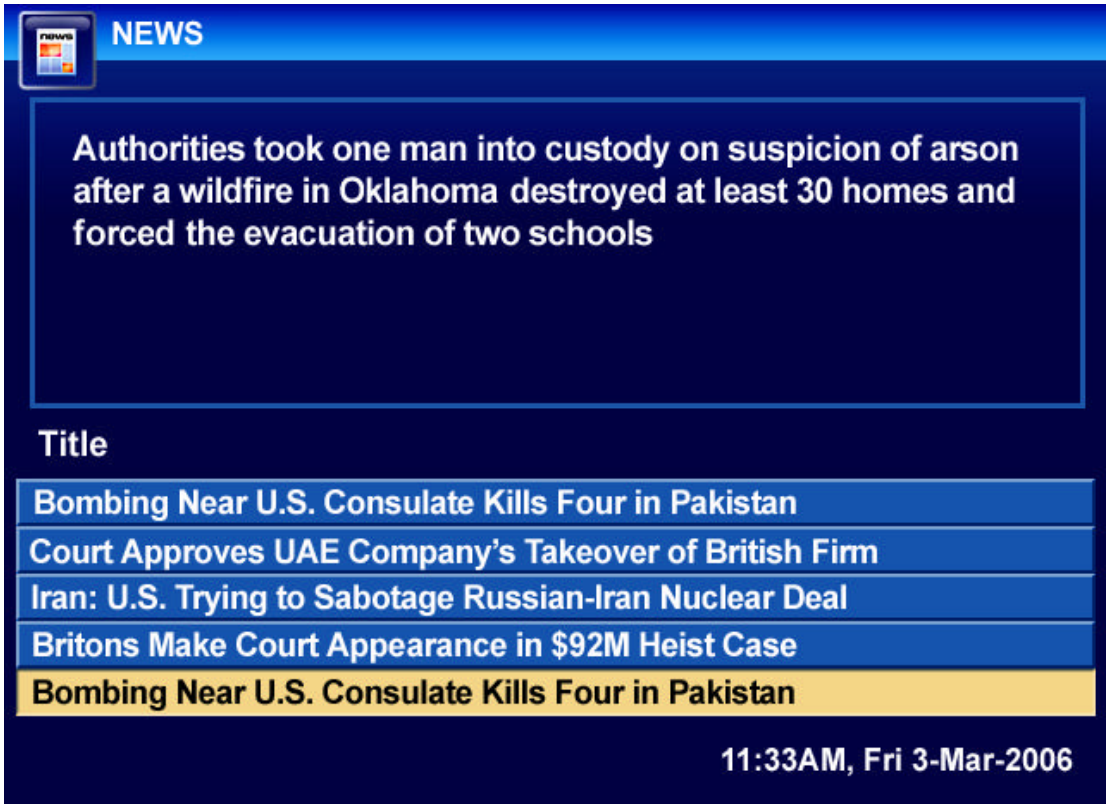
The Currency Exchange function allows the users to receive the most current currency exchange information. The currency exchange requires refresh and is updated every 30 minutes. Its accuracy is not guaranteed. This is informational service only.

	USD	EUR	GBP	CAD	AUD	CHF	JPY
USD	1.0000	1.1920	1.7466	0.8790	0.7453	0.7628	0.0086
EUR	0.8388	1.0000	1.4652	0.7374	0.6253	0.6399	0.0072
GBP	0.5725	0.6824	1.0000	0.5032	0.4267	0.4367	0.0049
CAD	1.1375	1.3560	1.9869	1.0000	0.8479	0.8678	0.0097
AUD	1.3415	1.5992	2.3433	1.1793	1.0000	1.0234	0.0115
CHF	1.3108	1.5626	2.2895	1.1522	0.9770	1.0000	0.0112
JPY	116.22	138.55	203.01	102.17	86.639	88.671	1.0000

Button	Function
Navigator-UP	Switches to the UP selection.
Navigator-DOWN	Switches to the DOWN selection.
Navigator-Left	Switches to the LEFT selection.
Navigator-RIGHT	Switches to the RIGHT selection.
Navigator-OK	Calculates the currency exchange result.
0-9 Buttons	Enters the numeric digits of the money entry that needs to be converted. Once done press “OK” to convert into the selected currency.
Func Key	Switches to the upper menu without sending the message.

4.1.20. News Service (Subscription Required)

The News function allows the users to receive the most current news information. The news information requires refresh and is updated every 30 minutes. The information accuracy is not guaranteed. This is informational service only.


NEWS
Authorities took one man into custody on suspicion of arson after a wildfire in Oklahoma destroyed at least 30 homes and forced the evacuation of two schools
Title
Bombing Near U.S. Consulate Kills Four in Pakistan
Court Approves UAE Company's Takeover of British Firm
Iran: U.S. Trying to Sabotage Russian-Iran Nuclear Deal
Britons Make Court Appearance in $92M Heist Case
Bombing Near U.S. Consulate Kills Four in Pakistan
11:33AM, Fri 3-Mar-2006

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu.

4.1.21. Stock Quote Service (Subscription Required)

The Stock Quote function allows the users to receive the most current stock quote information. The stock quote information requires refresh and is updated every 30 minutes. The information accuracy is not guaranteed. This is informational service only.

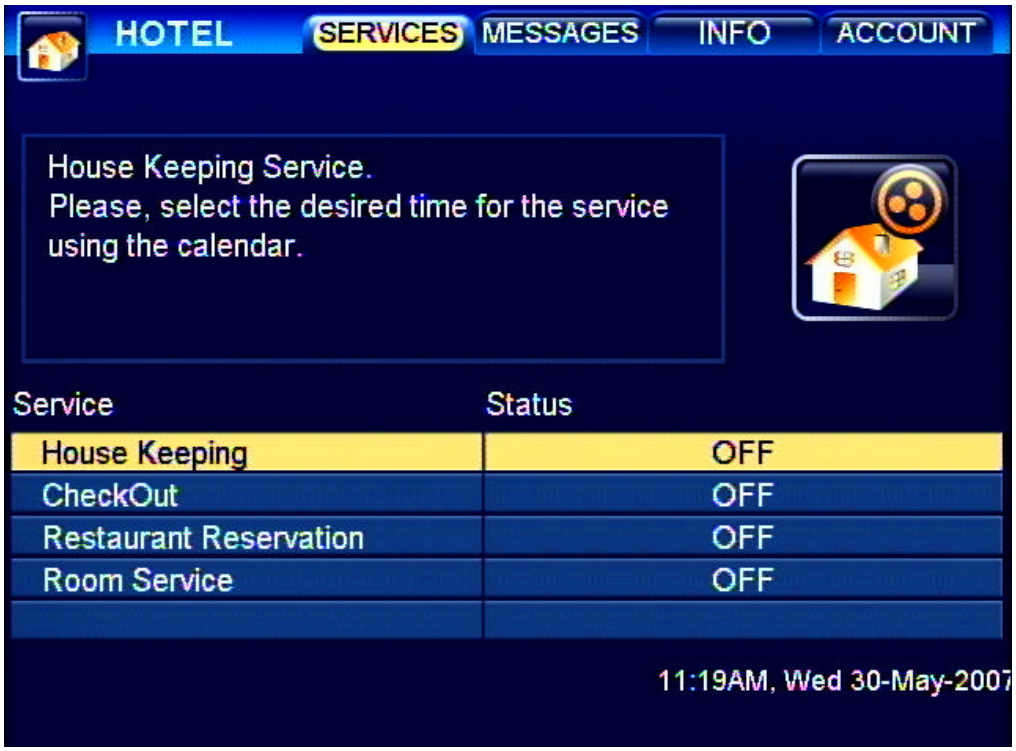
Button	Function
Navigator-Left	Deletes one character to the left.
Navigator-OK	Submits the Stock Quote request.
0-9 Buttons	Enters the alpha numeric digits of the Index of the Stock. To enter alpha characters, please press multiple times the 0-9 buttons. For example, to enter “A” press the “2” twice.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the quote request.

4.1.22. Lucky Numbers Service (Subscription Required)

The Lucky Numbers function allows the users to receive predictions about their daily lucky numbers. The information accuracy is not guaranteed. This is informational service only.

4.1.23. Hotel Management Service (Subscription Required)

The Hotel Management function allows the users to receive information about their hotel account and accommodations. The service also allows ordering of selected hotel services and receiving hotel messages. This function is available only in selected devic es. This is informational service only.



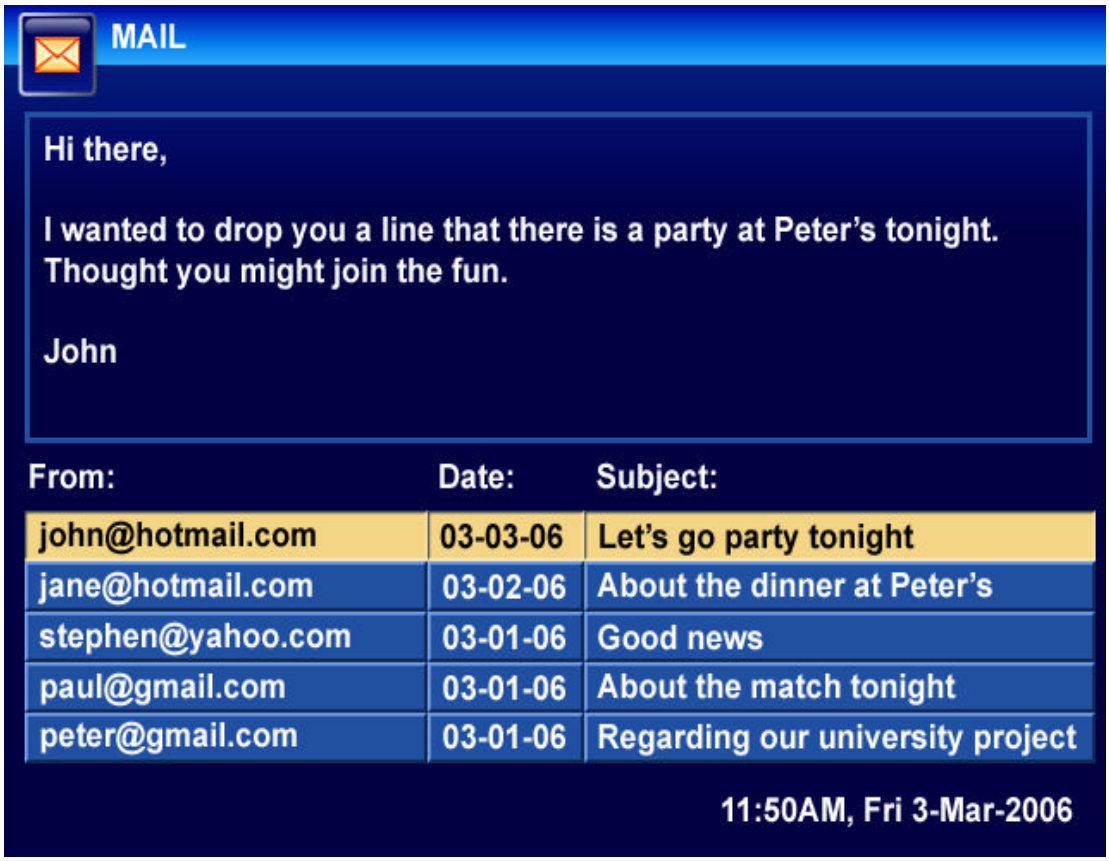
4.1.24. Communication Sub-Menu (Subscription Required)

TVBOX KM150 supports advanced Communication options to allow users to communicate online via E-mail, Phone and Chat/Messenger. In addition, the users have direct access to remote desktop computers via the Virtual Terminal support to allow them to telecommute or work remotely (requires software installation on the remote desktop).

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu.

4.1.25. E-mail Service (Subscription Required)

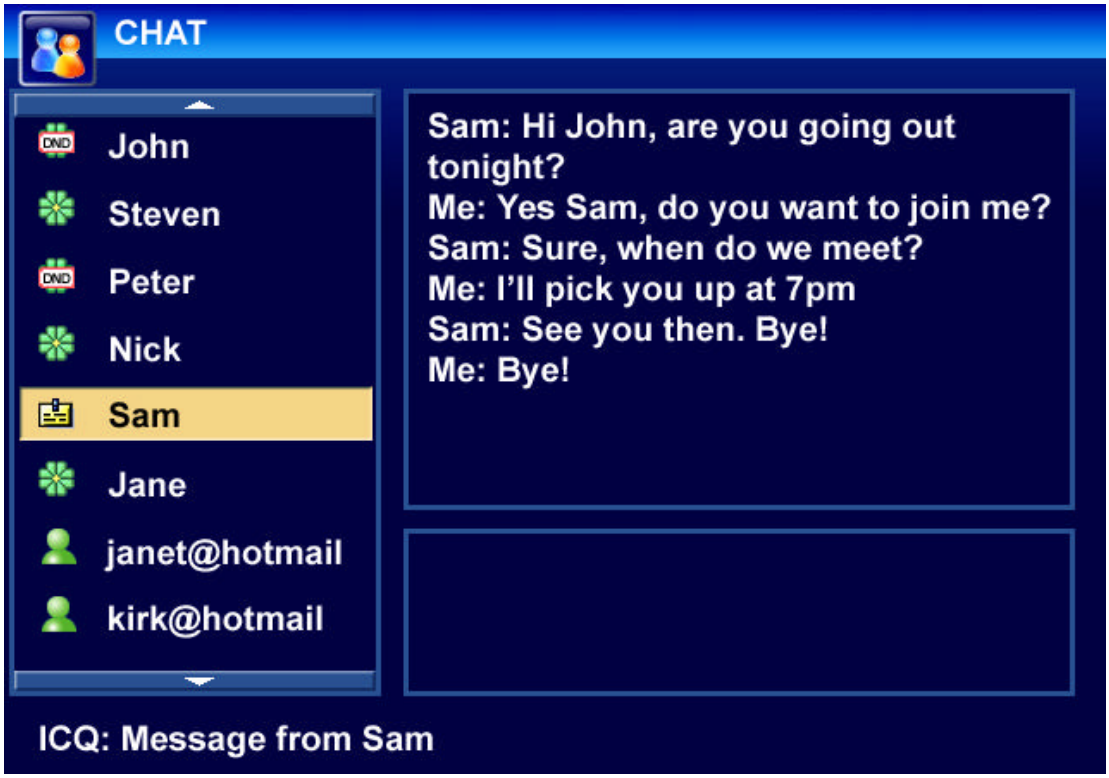
The E-mail function allows the users to receive and send e-mails. The service requires a valid external e-mail server that is configured via the Web interface. The device retrieves e-mails upon startup and requires refresh to retrieve new e-mails. This is informational service only.



Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu.

4.1.26. Chat/Messenger Service (Subscription Required)

The Chat/Messenger function allows the users to receive and send chat messages. The service requires a valid external chat server that is configured via the Web interface. The device retrieves messages upon startup and keeps track of all incoming messages once initialized.



Button	Function
Navigator-UP	Switches to the UP contact.
Navigator-DOWN	Switches to the DOWN contact.
Navigator-Left	Deletes one character to the left.
Navigator-OK	Sends the Chat message.
0-9 Buttons	Enters the alpha numeric digits of the message. To enter alpha characters, please press multiple times the 0-9 buttons. For example, to enter "A" press the "2" twice.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

4.1.27. Phone Book Service

Depending on the model of TVBOX KM150 purchased, Phone Book Services may not apply. The Phone Book function allows the users to keep track of their phone contact information. There is no practical limit on the number of contacts into the Phone book. The phone is interfaced with the Telephony function. Once a Phone Book entry is selected the subscribers can press “OK” to initiate a phone call to the listed destination. The function does not allow direct editing of the Phone book entries. All direct editing is done via the Web interface.

Button	Function
Navigator-UP	Switches to the UP data entry.
Navigator-DOWN	Switches to the DOWN data entry.
Navigator-LEFT	Switches between the data types within one data entry.
Navigator-RIGHT	Switches between the data types within one data entry.
Navigator-OK	Enters the selected function.
DEL	Deletes the Phone Book entry.
Func Key	Switches to the upper menu.

4.1.28. Virtual Network Console (VNC) Service

The VNC function allows the users to connect to remote computers and desktops in a desktop sharing fashion. The function is commonly used to allow telecommuters to work from remote locations or people to

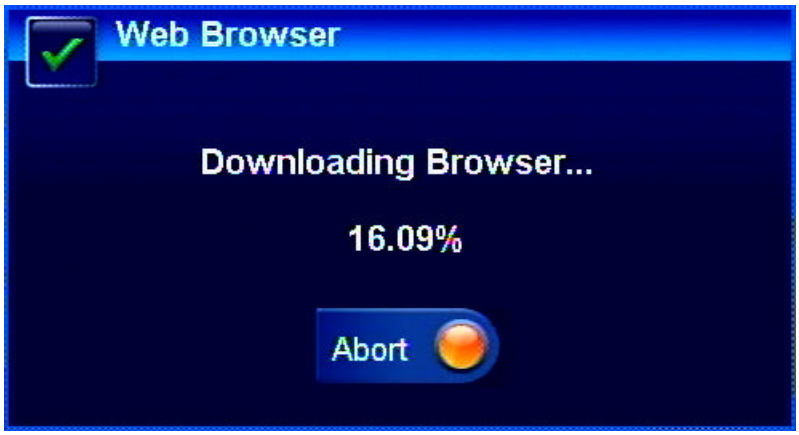
access their remote computers as if they were sitting at the console of the remote computer. The function requires valid VNC software to run on the remote computer. To set it up the subscribers must use the Web interface. The service requires also a compatible Infra Red keyboard and a mouse.

Button	Function
Navigator-OK	Sends the VNC password.
0-9 Buttons	Enters the numeric digits of the password. Once done, press “OK”.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

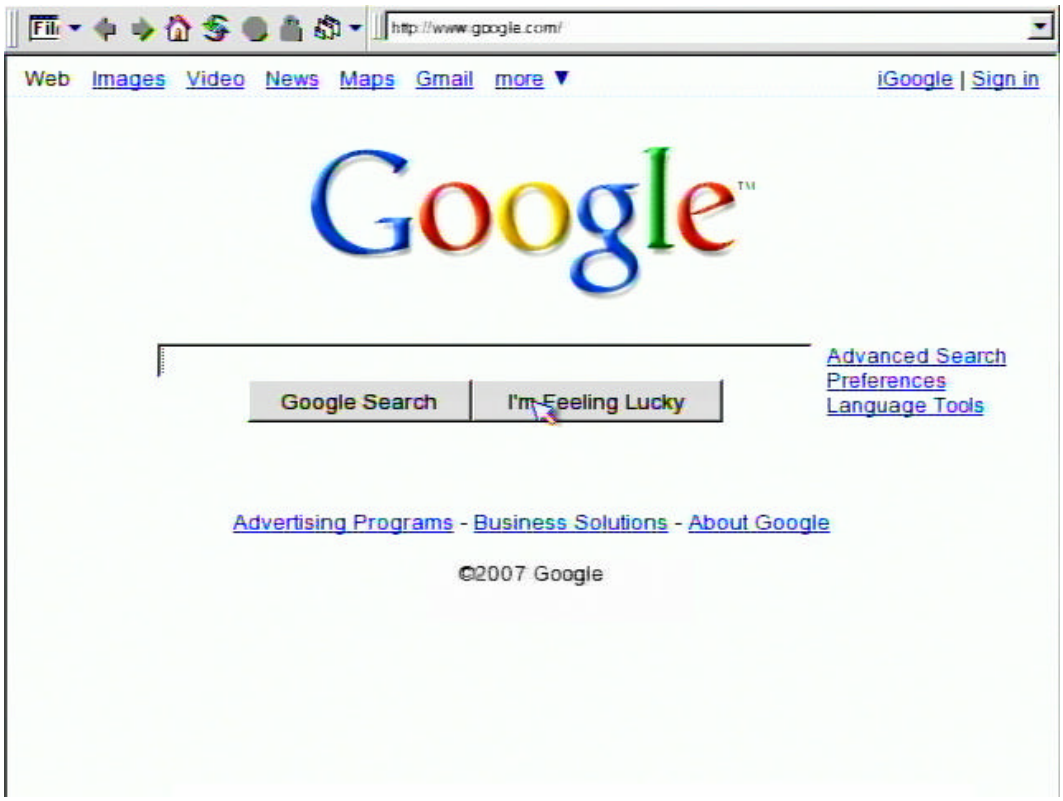
4.1.29. Web Browser Service (Subscription Required)

The Web Browser function allows the users to browse the Internet with a graphical web browser. The service requires that the users have a USB drive plugged into their device. In addition, the users must have Digital Media Center software installed on their desktop computer. The service requires also a compatible Infra-Red keyboard and a mouse.

When the service is run for the first time, a dialog shows up indicating that the TVBOX KM150 device is loading the browser into the USB stick for smoother operation. This is a one time operation upon initial use of a USB stick together with the web service. Every subsequent launch of the web service will be much faster as it will use the stored information on your USB stick.



Using a compatible infrared keyboard and mouse, you can use the TVBOX KM150 device as a general purpose web browser.



4.1.30. Services Sub-Menu (Subscription Required)

TVBOX KM150 supports advanced services options to allow users to have direct access to convenient services such as Calculator, Alarm Clock, Wake-up Call, Program Schedule, Setup and Search functions. The sub-menu is entered after the users select the Services option from the main menu. To return to the Main Menu, users must select "Exit" from the sub-menu.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-OK	Enters the selected function.
Func Key	Switches to the upper menu.

4.1.31. Program Scheduler Service

The Program Scheduler function allows the users to schedule different Video and Audio programs to start at a specified time. The service will switch to the selected program once the scheduled time is reached.

TV SCHEDULER
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30
March
2006
SET
REMOVE
Start Time: 13 : 50
Stop Time: 17 30
Channel: NBC
Action: RECORD
Total Time: 03:40 h
ID CHANNEL SCHEDULED TIME
CH1 Disney Channel 12:52 - 14:55
CH2 NBC 13:50 - 17:30
CH3 CBS 17:30 - 18:00
CH4 ESPN 18:30 - 19:10
CH5 MTV 20:10 - 21:20
CH6 FOX 22:00 - 23:40
11:50AM, Fri 3-Mar-2006

Button	Function
Navigator-UP	Switches to the UP channel entry.
Navigator-DOWN	Switches to the DOWN channel entry.
Navigator-LEFT	Navigates between data entries. . Must select the data entry by pressing “OK” prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-RIGHT	Navigates between data entries. . Must select the data entry by pressing “OK” prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-OK	Selects data entry for editing. Press the button again after changing the entry to commit the change.
DEL	Deletes the selected channel entry from schedule.
Func Key	Switches to the upper menu.

4.1.32. Calculator Service

The Calculator function allows the users to perform different types of mathematical functions.

Button	Function
Navigator-UP	Switches to the UP function.
Navigator-DOWN	Switches to the DOWN function.
Navigator-Left	Switches to the LEFT function.
Navigator-Right	Switches to the RIGHT function.
Navigator-OK	Executes the mathematical function.
0-9 Buttons	Enters the numeric digits of the number.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

4.1.33. Alarm

The Alarm function allows the users to schedule alarms. The service will trigger an alarm (initiate Ringing Alarm) via the TV set or via the Phone once the scheduled time is reached.

Button	Function
Navigator-UP	Switches to the UP alarm entry.
Navigator-DOWN	Switches to the DOWN alarm entry.
Navigator-LEFT	Navigates between data entries. . Must select the data entry by pressing "OK" prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-RIGHT	Navigates between data entries. . Must select the data entry by pressing "OK" prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-OK	Selects data entry for editing. Press the button again after changing the entry to commit the change.
DEL	Deletes the selected alarm entry from schedule.
Func Key	Switches to the upper menu.

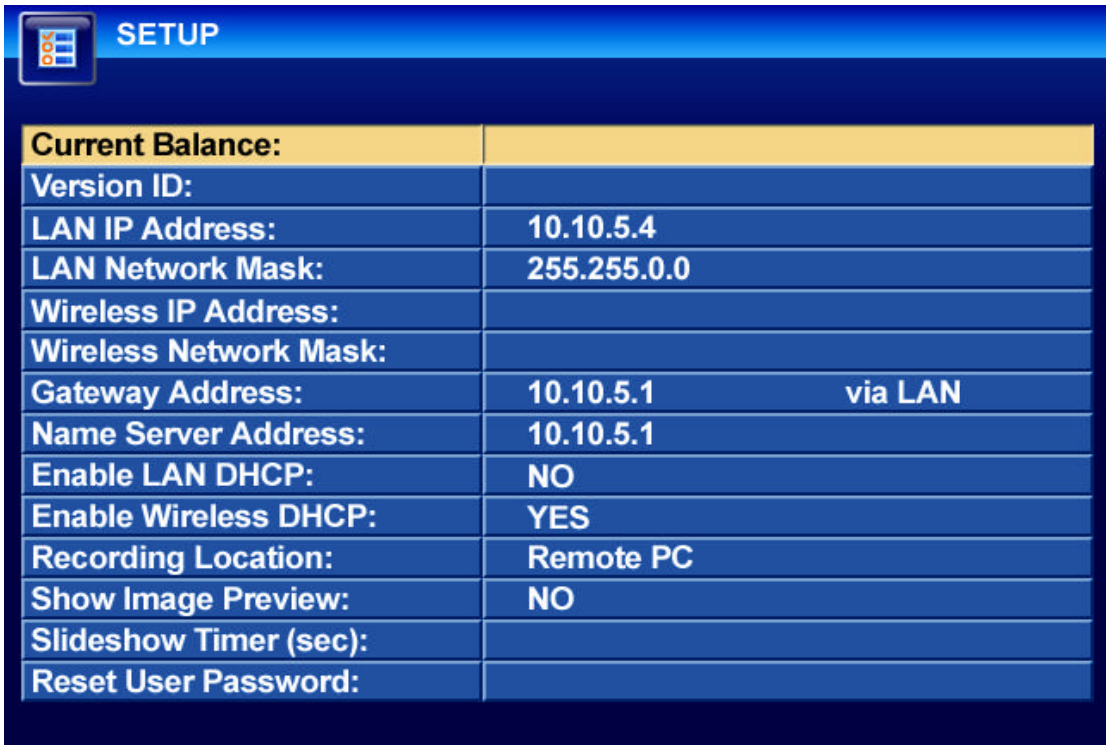
4.1.34. Wake-Up Call

The Wake-Up function allows the users to schedule wake-up calls to remote numbers. The service will trigger a wake-up call with IVR function to a predefined number once the scheduled time is reached. The wake-up call termination requires remote user interaction via the IVR functionality.

Button	Function
Navigator-UP	Switches to the UP wake-up call entry.
Navigator-DOWN	Switches to the DOWN wake-up call entry.
Navigator-LEFT	Navigates between data entries. . Must select the data entry by pressing “OK” prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-RIGHT	Navigates between data entries. . Must select the data entry by pressing “OK” prior to changing it. Once selected the button allows changes to the selected data entry.
Navigator-OK	Selects data entry for editing. Press the button again after changing the entry to commit the change.
DEL	Deletes the selected wake-up call entry from schedule.
Func Key	Switches to the upper menu.

4.1.35. Setup Service

The Setup function allows the users to setup basic system parameters. The setup parameters include network, authentication, balance, and other parameters. Not all configuration parameters are accessible via this function. If the users need to configure other parameters they can use the Administrative Web Interface.



Button	Function
Navigator-UP	Switches to the UP data entry.
Navigator-DOWN	Switches to the DOWN data entry.
Navigator-Left	Deletes one character to the left. Also used to scroll between available data entry options.
Navigator-OK	Saves the data entry.
0-9 Buttons	Enters the numeric digits of the setup entry. To enter "." Press "*".
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

4.1.36. Search Service

The Search function allows the users to search the complete media content accessible by the device. The search will find and sort Video, Audio, Picture, and User content utilizing substring match functions. To switch between different content types the users must select the desired folder type.

Button	Function
Navigator-UP	Switches to the UP data entry.
Navigator-DOWN	Switches to the DOWN data entry.
Navigator-Left	Deletes one character to the left. Also used to scroll between available data entry options.
Navigator-OK	Saves the data entry.
0-9 Buttons	Enters the alpha numeric digits of the search entry. To enter alpha characters, please press multiple times the 0-9 buttons. For example, to enter “A” press the “2” twice.
DEL	Deletes a single character to the left.
Func Key	Switches to the upper menu without sending the message.

5. Configuration Guide

5.1. Configuration with Web Browser

TVBOX KM150 series Digital Media Center has an embedded Web server that will respond to HTTP GET/POST requests. It also has embedded HTML pages that allow a user to configure the Digital Media Center through a Web browser such as Microsoft Internet Explorer or Netscape or Mozilla.

5.1.1. Access the Web Configuration Menu

The Digital Media Center Web Configuration Menu can be accessed by the following URI: http://ip-of-the-device where the Device-IP-Address is the IP address of the device. The default IP address of the device is http://192.168.0.10. To retrieve the IP address of the device, enter the Graphical menu and select Setup option.

5.1.2. User Login Dialog

Once this HTTP request is entered and sent from a Web browser, the TVBOX KM150 will respond with the following login screen:

The password is case insensitive with maximum length of 25 characters and the factory default password for “user” is “54321”. The default login and password for administrators is “admin” and “12345”.

5.1.3. Start Menu

To enter the all configuration options after you log in press the START menu and select Navigator.

5.1.4. System Information Dialog

Upon successful authentication the system will display the following System Information screen. Click on the left end of the line to open the System Information screen.

The System Information is used for information purposes only and does not allow direct data entry. The table below explains the data parameters of the form.

IP Address	This is the IP Address of the device
MAC Address	This is the MAC address of the device.
DNS Server	This is the IP of the DNS server.
Proxy IP	This is the IP Address or the Domain Name of the SIP proxy server
CallerID	This is the Caller ID of the device. This number represents the device number of the device.
Device Status	This is the status of the device. There are two options for this parameter. Not Registered and Registered according to the SIP Registration status. Usually the device requires registration before making calls if its bind to a service provider.

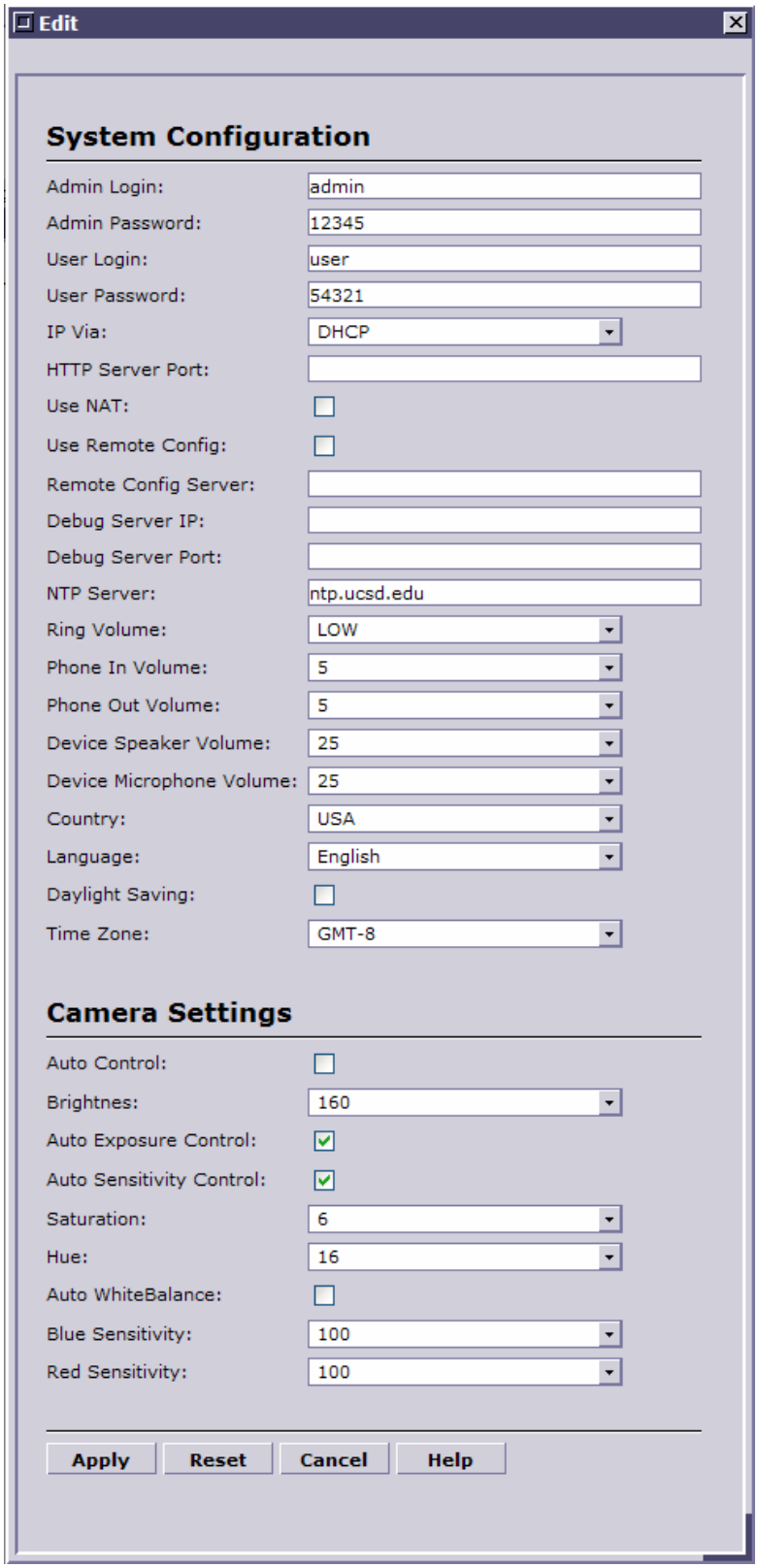
Device Name	This is the system name of the device.
Firmware version	This is the firmware version currently installed on the device.
Configuration Version	This is the configuration version of the device. The version is only updated upon remote configuration via the auto provisioning functionality.
User Role	This is the role of the currently logged user. There are two roles that are supported: “user” and “admin”. The “admin” account can modify every device parameter, while the “user” account can only modify small set of parameters to allow the normal device operation.
Current Time	Shows the current time.
Uptime	Shows the time since the last reboot.

To go to the screens that allow actual data entry the user must use the left navigation menu. Once clicked the option opens the appropriate right dialog that allows data entry. All user sessions will be timed out after 10 minutes inactivity to allow high level of security. The “user” and the “admin” views of the system are different so if one user logs in using the “admin” account, he/she will see much different data dialogs. These data dialogs are explained in detail below.

Note:

This manual contains web settings operational guidelines for both Admin and User roles. If logged with the User account, you will notice some sections of the menu or parts of dialog boxes are missing, this is because the User privileges are limited to partial access.

5.1.5. System Configuration Dialog



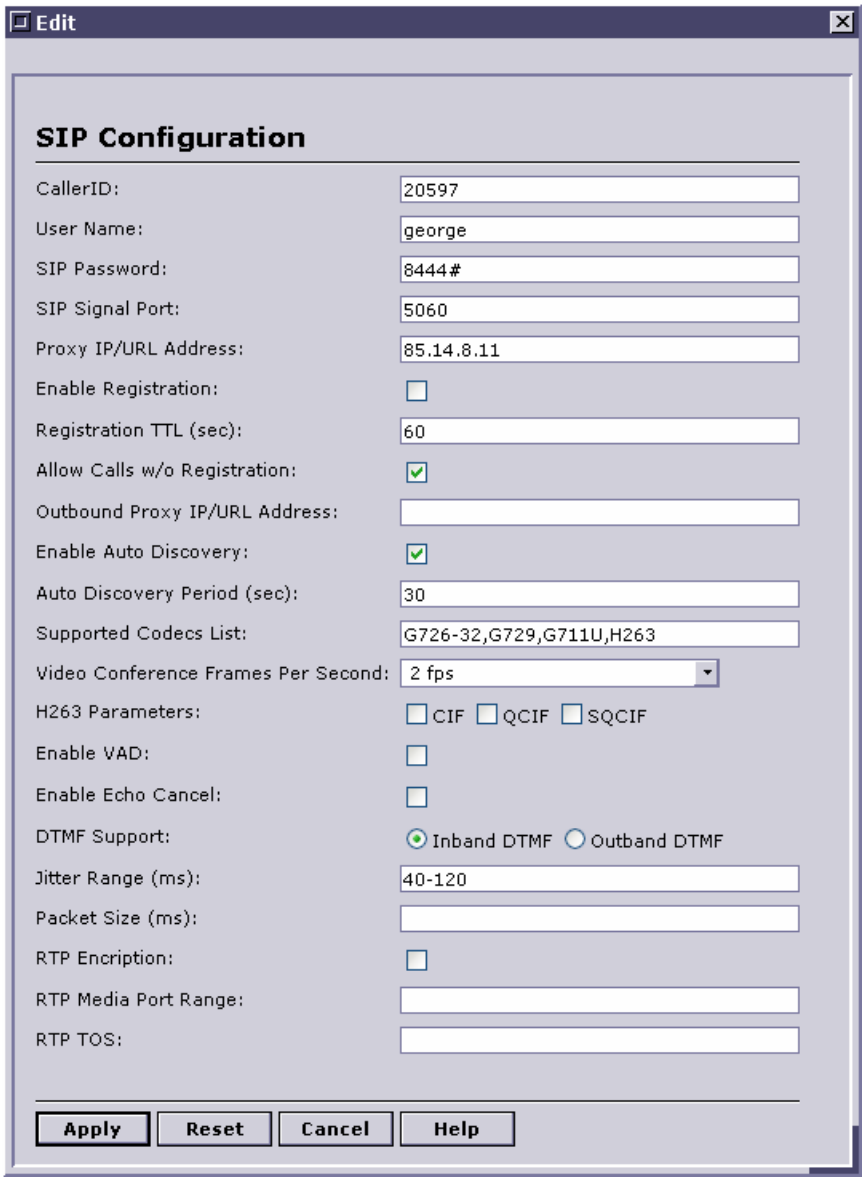
Some of the parameters will not be displayed if the user has logged in as "user" account. After entering the data the user must press SAVE to permanently commit the information. No reboot is necessary for the data to take effect. **(**Depending on the model of TVBOX KM150 purchased, some of the System Configuration settings may not apply.)**

Admin Login	This is the custom login for the "admin" account. Users must keep this login a secret to avoid unauthorized access. If this device is bind to a service provider usually this login will not be disclosed to the device users and the device will be locked for administrative access.
Admin Password	This is the password for the "admin" account. Users must keep this password a secret to avoid unauthorized access.
User Login	This is the custom login for the "user" account. Users must keep this login a secret to avoid unauthorized access. If this device is bind to a service provider usually this login will available to allow users to perform basic administrative functions to the device.
User Password	This is the password for the "user" account. Users must keep this password a secret to avoid unauthorized access.
Default Interface	This is the default network interface that will be selected. If the device does not have a Wireless interface then this interface will be setup to "eth0". If the device has a Wireless device that is used to connect to the Internet then this interface should be set to 'wireless". If the device has a wireless interface but still uses its Ethernet cable to connect then the selection should be "eth0".
IP Via	The selection allows DHCP or Static IP assignment to the Ethernet interface of the device. If DHCP is selected the device will acquire its IP address dynamically.
Static IP	This is the static IP Address of the device. This IP address will be ignored in the DHCP Server selection is enabled. The Static IP address will still be saved in the memory.
NetMask	This is the Network Mask for the Static IP address. The default value is: 255.255.255.0. This network mask will be ignored in the DHCP Server selection is enabled.
Uplink Gateway	This is the IP address of the Uplink Gateway required to connect the device to the outside network (Internet). Usually this is the IP address of the Home router or the Business NAT Firewall. This IP address will be ignored in the DHCP Server selection is enabled.
DNS Server	This is the IP address of the DNS server. The DNS IP address will be ignored in the DHCP Server selection is enabled.
Use NAT	This option allows the device to function as a NAT router for clients to connect to the Internet. If enabled, clients can connect to the device using ether its LAN or wireless interface and use the device as a default router.
Use Remote Config	This option enabled the automated remote provisioning of the device. Once configured, the device will try to retrieve its configuration form the selected remote location in the Remote Config URL field. This option should be enabled if this device is bind to a service provider.
Remote Config Server	This field is used to store the location of the remote configuration script for the device. If this device is bind to a service provider this filed should point to the URL of the provisioning agent or program. The device will automatically insert Version and MAC information into the target URL.
Debug Server IP	This is the IP of the debug server that will accept all debug messages that are spooled from the device. The debug server IP is used to collect all debug messages from the device.
Debug Server Port	This is the Listening Port of the Debug Server that will collect the debug

	information send from the device.
NTP Server	This is the IP address or Domain Name of the NTP (Network Time Protocol) server. The server will be used to synchronize the device's time.
Ring Volume	This is the ringer volume of the device. This volume can also be controlled via the TV or LCD interface.
Phone In Volume	** This is the volume that allows control of the audio signal that is sent to the headset.
Phone Out Volume	** This is the volume that allows control of the audio signal that is sent from the headset.
Device Speaker Volume	** This is the volume that allows control of the audio signal that is sent to the speakerphone or to TV monitor speakers.
Device Microphone Volume	** This is the volume that allows control of the audio signal that is sent from the speakerphone or from the device microphone.
Country	This is the location of the device. The information used for accurate Weather information.
Language	This is the language selection of the user. The selection allows service providers to customize the device interfaces to alternative languages.
Daylight Savings	This option should be checked once the region (where the device is located) switches to/from the Daylight Savings time. This parameter controls whether the time will be displayed in daylight savings time or not. If Checked, the displayed time will be 1 hour ahead of normal time
Time Zone	This parameter manages the time zone of the device.
Camera Settings	**
Auto Control	** Global Auto control for the camera settings. This is the default setting.
Brightness	** Manual control for the camera brightness.
Auto Exposure	** Auto control for the camera exposure.
Auto Sensitivity Control	** Auto control for the camera sensitivity.
Saturation	** Manual control for the camera saturation.
Hue	** Manual control for the camera hue.
Auto White Balance	** Auto control for the camera white balance.
Blue Sensitivity	** Manual control for the camera blue sensitivity.
Red Sensitivity	** Manual control for the camera sensitivity.

5.1.6. SIP Configuration

Depending on the model of TVBOX KM150 purchased, the SIP Configuration may not be apply. TVBOX KM150 can support advanced SIP functionality to allow it to function as a stand-alone PBX system or an integrated device connected with an external SIP server. In addition, the device supports a Patent-Pending SIP Auto Discovery protocol to allow automated infrastructure build-up without an external SIP Registrar or Proxy server. The Web interface shown in the image below allows advanced management of this functionality.



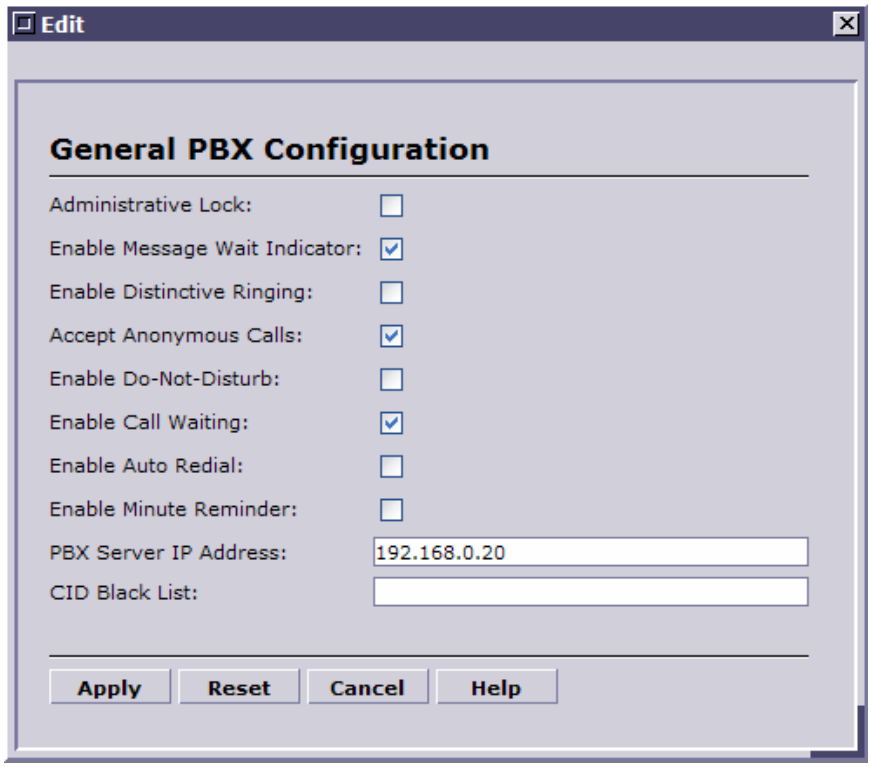
CallerID	This is the caller id of the SIP device. TVBOX KM150 supports a single caller ID in default, but can also support more virtual Caller ID numbers utilizing an external SIP Proxy server such as VoiceMaster.
User Name	This is the name of the user that operates the device.
SIP Password	This is the alpha-numeric SIP password that is used to authenticate the device when communicating with an external SIP registrar utilizing MD5 encryption. Usually this field is populated with the PIN of the account that is used with the service provider that supports the device.
SIP Signal Port	This is the port that is used for SIP communication. The default value of this port is 5060 but can be changed is necessary to accommodate worldwide operation. Many ISP providers may block port 5060 and to be able to operate in such environments device users may want to change the default SIP port to another value.
Proxy IP/URL Address	This is the IP Address or the Domain Name of the SIP proxy server. Usually providers utilize Domain Name SIP proxy entry to guarantee service failover and redundancy.

Enable Registration	This filed will enable or disable device registration in the defined SIP Registrar. SIP Registration is required to allow NAT traversal and proper call authentication and routing by service providers. In most cases this filed will be checked if the users use external providers to handle their device traffic.
Registration TTL (sec)	This is the Registration Time-To-Live (TTL) parameter in seconds. This parameter defines how long the registration will be active and what is the period between TTL requests to the SIP Registrar. It is also used to ensure that the NAT traversal port is open to be able to accept inbound calls. The default value of this field is 60.
Allow Calls w/o Registration.	This filed will allow calls without registration in a Peer-to-Peer scenario. In most cases registration is required if the device is services by service providers.
Outbound Proxy IP/URL Address	This is the IP Address or the Domain Name of the Outbound SIP proxy server. Usually providers utilize Domain Name SIP proxy entry to guarantee service failover and redundancy. The SIP standard for the Outbound SIP Proxy server and the SIP Proxy server to be different servers.
Enable Auto Discovery	TVBOX KM150 supports Patent-Pending SIP Auto Discovery via LAN broadcasts to find out other devices that are located within its network. This functionality is extremely useful to identify and setup device infrastructures without the use of external SIP proxy servers. It is commonly used in business offices where devices are located within the same VPN or LAN. Enabling Auto Discovery will make the device aware of other devices and make itself known to other devices.
Auto Discovery Period (sec)	This is the period in seconds that is used by the device to make LAN or VPN broadcasts making itself known and requesting information about other devices. This is part of the Patent-Pending SIP Auto Discovery protocol that the company has developer.
Supported Codecs List	This is the comma-separated list of supported codecs. Supported codecs include: G711A, G711U,G729A,G726, H.264 (Video Conference)
Video Conference Frames per Second	This is the number of frame samples per second that is sent out of the device camera. The number selection allows management of the bandwidth that the video conference takes. The lower the number of frames per second, the lower the bandwidth consumed by the device.
H263 Parameters	This is the selection of the video conference mode resolution. To send the largest picture, set to mode to CIF (default), for smaller picture resolution to QCIF and for the smallest picture resolution SQCIF.
DTMF Support	Selection for DTMF support. The device will send out DTMF signals based on this selection, to ensure that it can properly communicate with all types of SIP equipment. Two options are available: Inband DTMF – allows the device to send the actual sound that represents the DTMF selection. Outband DTMF – allows the device to send the DTMF signal that represents the DTMF selection. In provider infrastructures the usual selection is Outband DTMF since it is more reliable and greatly reduces the misfiring of the DTFM detecting engines.
Jitter Range	This is the Jitter range in milliseconds. High jitter values allow devices to communicate better in high latency networks. Low jitter values are used in low latency networks for improved voice quality. The default value of this filed is 30-300.
Enable Echo Cancel	Checking this option will enable the Echo Cancel of the device. This is

	required to reduce acoustic echo.
Enable VAD	This option will allow activation of the Voice Activated Detection (VAD) functionality which will enhance the overall bandwidth performance of the device reducing the consumed bandwidth with at least 25% percent.
Packet Size	This is the packet size in milliseconds. Packets Sizes vary in different when using different codecs and connect to different gateway servers. The default value is 30 ms packet size.
Encrypt SIP Messages	The option allows SIP messages encryption among SIP proxy, SIP gateway, and SIP CPE devices. This is a proprietary SIP messages encryption protocol.
RTP Encryption	The option allows RTP (voice/video data) encryption among SIP proxy, SIP gateway, and SIP CPE devices. This is a proprietary SIP messages encryption protocol.
RTP Media Port Range	This is the port range for the RTP media. RTP is the stream that carries the encoded voice. Default values are: 16000-63000
RTP TOS	This is the RTP media Type-of-Service (TOS) packet setting. The default value is: 0x10.

5.1.7. General PBX Configuration

Depending on the model of TVBOX KM150 purchased, the General PBX Configuration function may not be apply. TVBOX KM150 can support advanced stand-alone PBX functionality to allow independent PBX feature support that does not rely on external PBX or IP Centrex servers. The below Web interface allows advanced management of this functionality. Click on the left end of the line to open the PBX Configuration dialog.

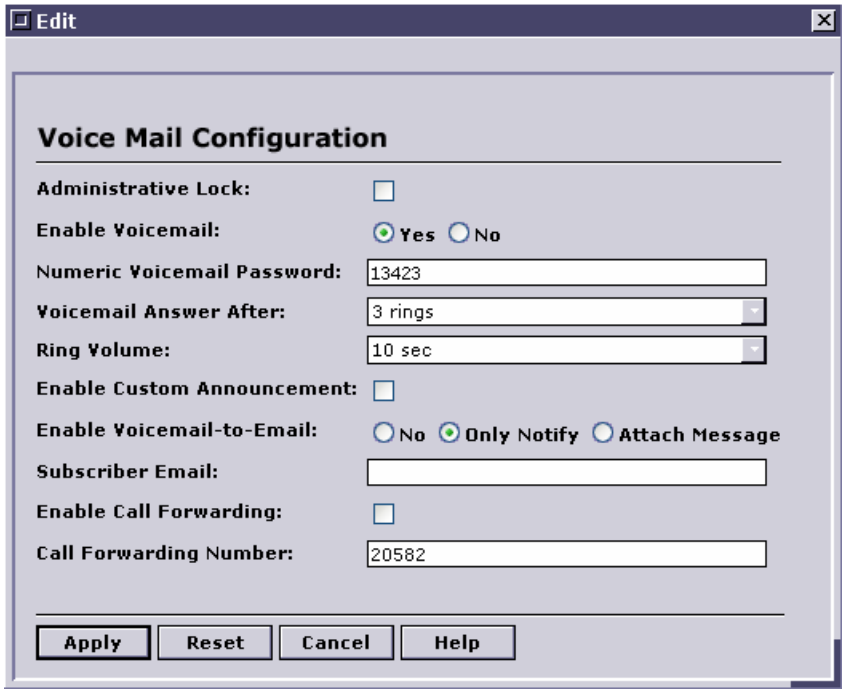


Administrative Lock	This option allows service providers to lock the selections for this section to a predefined value so that they can not be managed by the users.
Enable Message Wait Indicator	The option allows user to enable and disable the message wait indicator. If disabled the device will not display via LED or SIP protocol the MWI (Message Wait Indicator) to notify the user that there is a new message left in the Voic e-mail.
Enable Distinctive Ringing	The device offers custom ring tone functionality that allows CallerID –based ringing. If a caller is identified from within the Phone Book and has a custom ring associated with the Phone Book entry the device will produce a custom ring tone. If this option is disabled the device will not produce custom ring tones.
Accept Anonymous Calls	Allows the device to accept calls from without a caller ID (anonymous calls)
Enable Do-Not-Disturb	This function will allow the device to be put in DND (Do-Not-Disturb) mode. If the selection is active the device will not answer any incoming calls. All calls will be forwarded to Voic e-mail or to the selected Forwarding Number.
Enable Call Waiting	This option allows the Call Wait function to be disabled. If

	disabled, the user will not be able to hear a sound notification if there is a second call on the line and view the CallerID details of the second caller on the LCD screen.
Enable Auto Redial	This function allows the last number to be redialed automatically if the initial dial attempt returns a busy answer. The device will automatically redial every 10 seconds the last number until it is hung up or the number answers the call.
Enable Minute Reminder	This function will produce a beep sound 10 seconds before the each minute ends. The function allows the users to control their billable time.
PBX Server IP Address	This function allows PLAR support. The device will first connect to this server and then dials the selected numbers. The PBX DTMF commands are entered directly after the Feature button is pressed.
CID Black List	This is the Called ID black list. The numbers that the device must reject calls from are entered in this field separated by ‘,’.
Enable Outbound Ring Tone	This option will enable ring tones while dialing out.
CID Announcement Ringing	This option will make the system state the caller id via voice IVR while there is an inbound call ring.

5.1.8. Voice-mail Configuration

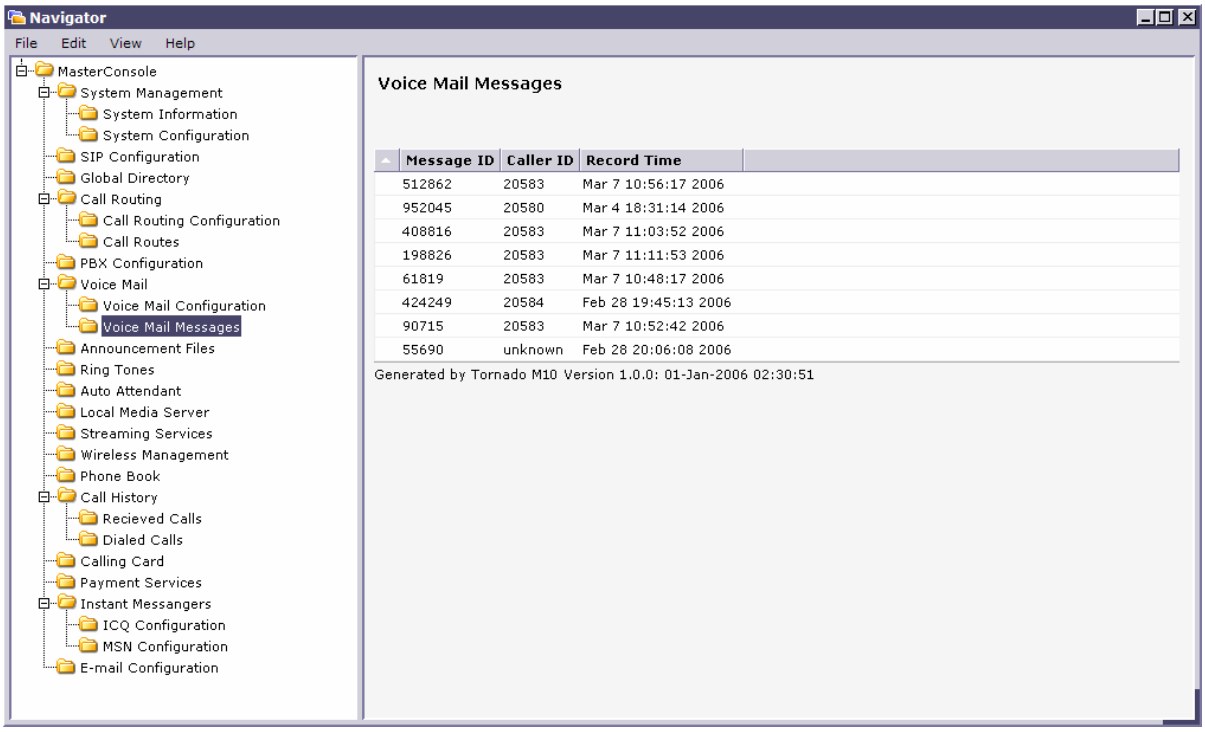
Depending on the model of TVBOX KM150 purchased, the Voice-mail Configuration function may not be apply. TVBOX KM150 can support advanced Voice-mail functionality to allow independent Voice-mail feature support that does not rely on external Voice-mail servers. The web interface shown in the image below allows advanced management of this functionality.



Administrative Lock	This option enables administrators to lock all options of the Voice-mail functionality.
Enable Voice-mail	This field enabled and disabled the Voice-mail server.
Numeric Voice-mail Password	Users can setup the Numeric Voice-mail Password that allows access to the Voice-mail IVR menu system. The password is used to access the Voice-mail from remote location via device. Once connected to the Voice-mail the user must press 2 and then enter the Voice-mail password to access the Voice-mail IVR menu.
Voice Mail Answer After	The field allows the user to configure after how many rings the Voice-mail will answer an incoming call. Usually the number of rings is setup to 4 or more to allow sufficient time of the user to pick up the device before the Voice-mail answers. If the user wants the Voice-mail to answer all calls automatically without ringing this value should be set to 0.
Message Duration	This is the voice-mail duration in seconds. The user must reduce the duration of each message to be able to accept more messages.
Enable Custom Announcement	If checked this filed will enable custom user greeting/announcement. The announcement can be changed using the IVR menu of uploaded via Web.
Enabled Voice-mail-to-E-mail	This filed allows support for Unified Messaging. The are three options for select: **No** – there will be no e-mail notification once a new Voice-mail arrives **Only Notify** – the system will send an e-mail notification about the Caller ID, Time, and the Duration of the new Voice-mail. The Voice-mail voice file will NOT be attached. **Attach Message** – the system will send an e-mail notification about the Caller ID, Time, and the Duration of the new Voice-mail. The Voice-mail voice file will be attached.
Subscriber E-mail	This is the e-mail that will be used to send the e-mail notification to. The e-mail will be send with or without the Voice-mail voice file attachment.
Enable Call Forwarding	This field enabled or disabled call forwarding. If selected and if proper call Forwarding Number is present, the system will forward the call instead of sending it to the Voice-mail. Call Forwarding has a priority over the Voice-mail.
Call Forwarding Number	This is the Call Forwarding Number where the call will be automatically forwarded after a predefined number of rings. Users can enter alternative device numbers or their mobile/GSM number in this filed to ensure that all incoming calls will be answered.

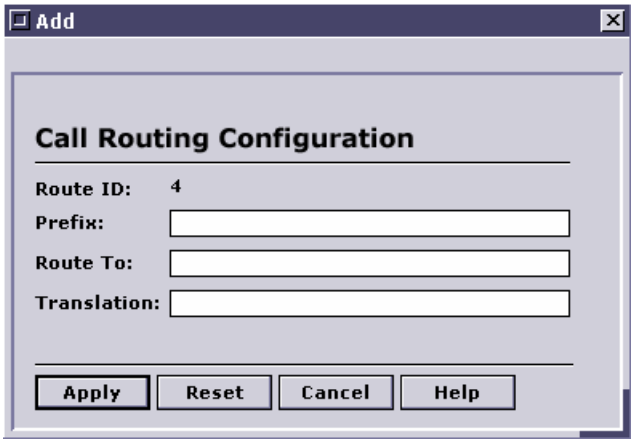
5.1.9. Voice-mail Messages Administration

Voice-mail Messages are managed utilizing the “Edit” menu. Subscribers must high-light the desired message first, and then select “Edit”. To download or play a Voice-mail message, press “Download”. To delete a Voice-mail message, press “Delete”.



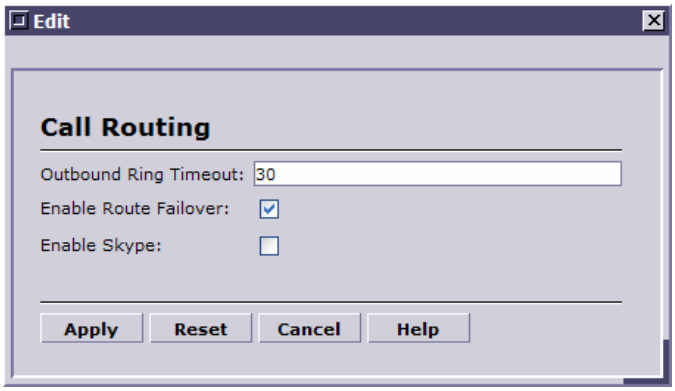
5.1.10. Call Routing Configuration

Depending on the model of TVBOX KM150 purchased, the Call Routing Configuration may not be apply. TVBOX KM150 can support advanced call routing functionality to allow independent call routing feature support that does not rely on external SIP routing servers. The system supports up to 10 independent routes that can point to SIP proxy servers, SIP gateways (point-to-point), and to FXO device lines. All route matching is done of the longest prefix match first. The system supports advanced route failover to guarantee that all calls find available routes. The Web interface shown in the image below allows advanced management of this functionality.



Route ID	This is the Route Index. This is the route index. All matches are done based on the longest prefix match first and then if the prefixes are the same on the Route Index.

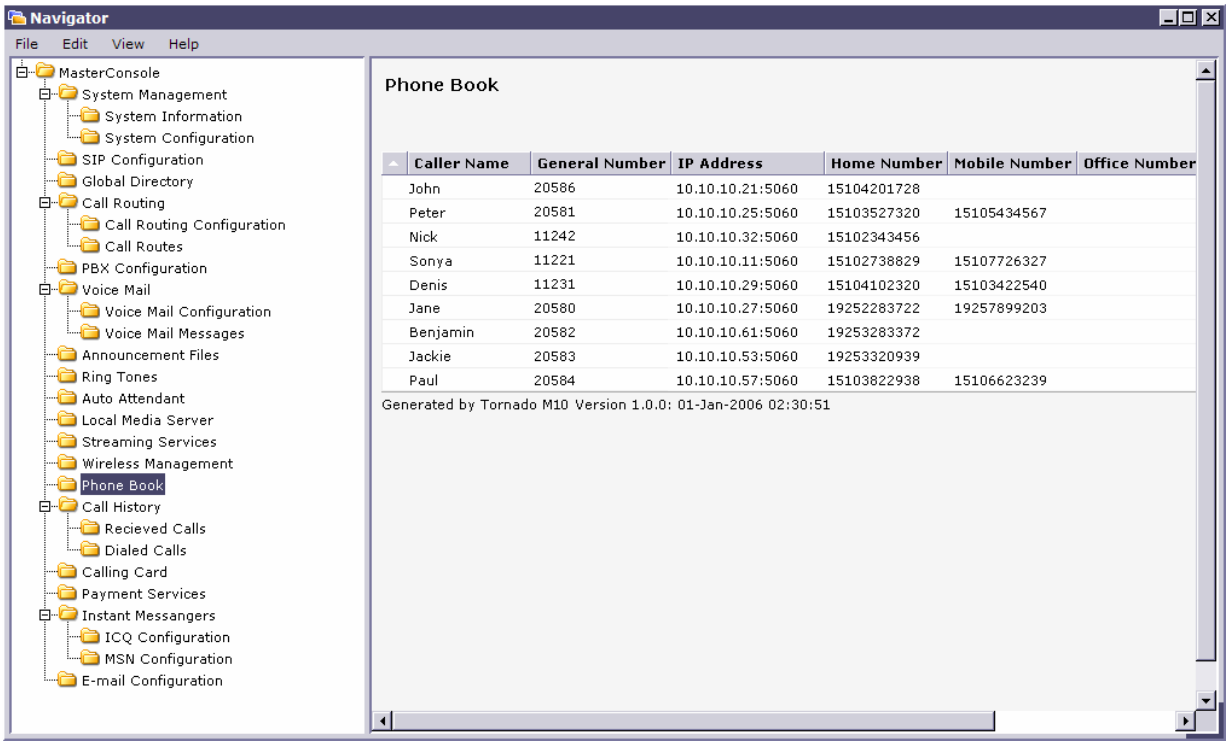
Prefix	This is the prefix that needs to be matched against the number. All outbound calls are compared against the existing prefixes and then routed based on longest prefix match and route index. If the Enable Route failover is checked, the system will try all available routes in sequence until the call is successful or fails.
Route To	This field displays the IP Address or the Domain Name of the terminating SIP End Point. The filed may be an IP Address or a Domain Name or the keyword DEVICE. If the field is the IP address of a SIP proxy server or SIP gateway, the system will automatically route and terminate the call to it. If the keyword DEVICE is used the system will attempt to terminate the call via existing FXO device line.
Translation	This field allows automated number translations. Number Translation allows conversion of a dialed number into another number to normalize it according to the termination End Point that is selected. For example, a number may need some sort of country or area code prefix before being sent out to the termination server. For more information about translation algorithms please refer to Appendix T



Outbound Ring Timeout	The device will terminate the call attempt if the call is not connected to the called station within a predefined period of time in seconds. This timeout allows manageable route failover procedure to ensure that all calls are timely connected to their destination. The Default Outbound Ring Timeout is 30 seconds.
Enable Route Failover	This selection allows route failover for all outbound calls. This route failover is enabled, the device will attempt to reconnect to the number utilizing alternative routes that exist in its routing table.
Enable Skype	This selection will allow calls to be accepted from or send to the Skype network. The Skype support requires Digital Media Center software to be installed on the subscriber desktop. The Skype software should also be installed on the same desktop as the DMC software.

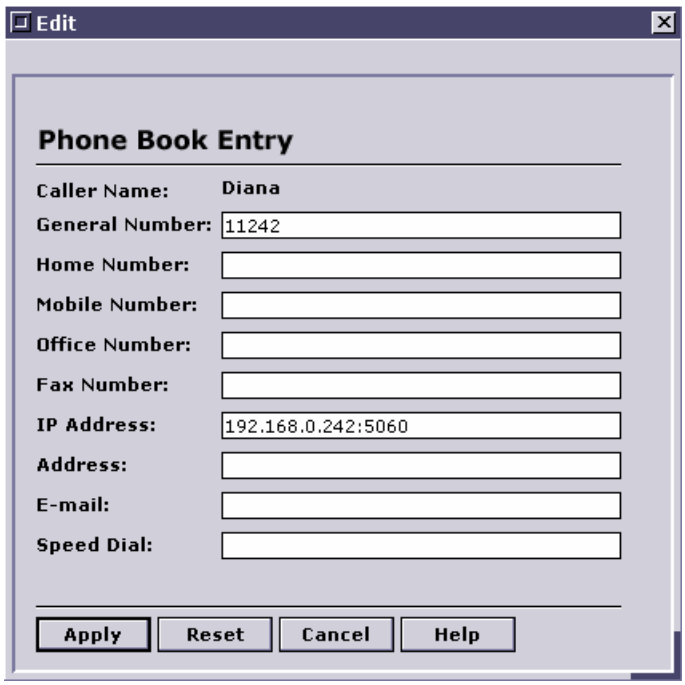
5.1.11. Phone Book Configuration

Depending on the model of TVBOX KM150 purchased, the Phone Book Configuration may not apply. TVBOX KM150 can support advanced Phone Book functionality to allow easy contact management and selection. The system supports unlimited number of support entries that include comprehensive information about the contact on file. The Phone Book is managed via the Web interface. To delete a Phone Book entry, select the entry and then click on "Edit" and then "Delete". Click on the left end of the line to open the Phone Book Configuration dialog.



5.1.12. Phone Book Entry Configuration

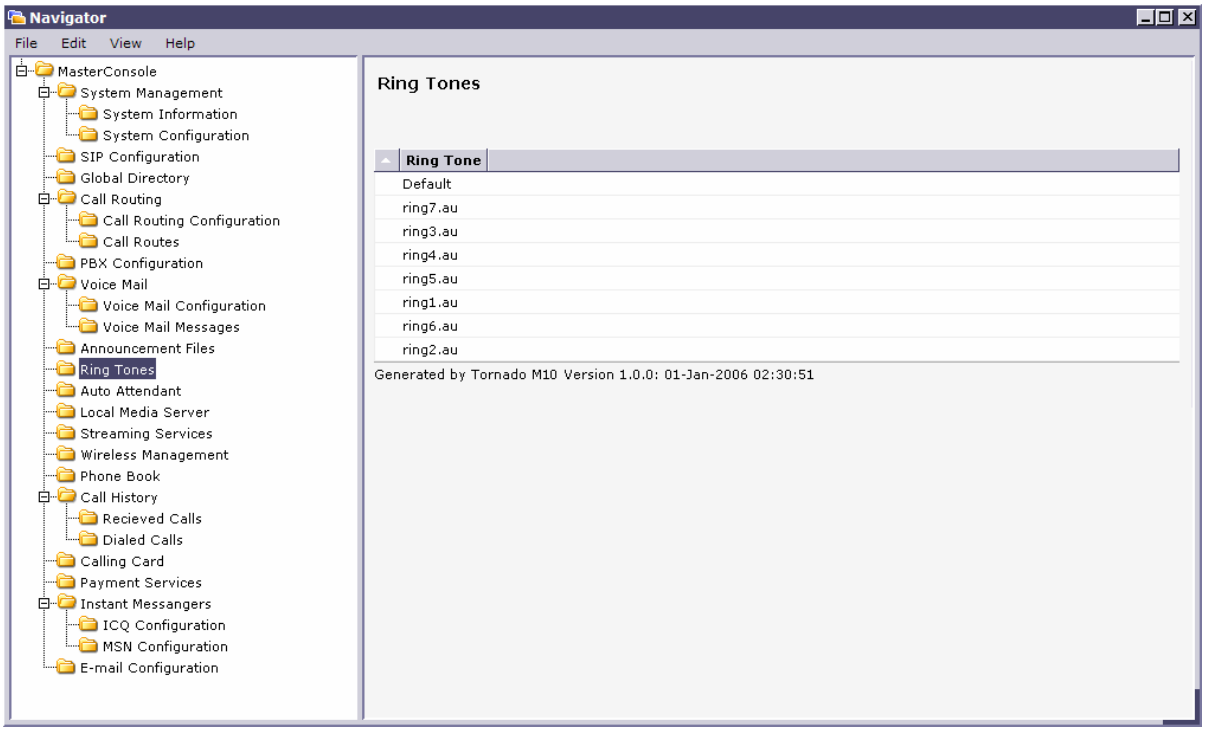
TVBOX KM150 can support advanced Phone Book Entry management functionality to allow easy contact management and selection. The Phone Book is managed via the Web interface.



Caller Name	Press the Caller Name button to enter the Phone Book Entry dialog to modify the contact information.
General Number	This is the general device number of the contact person.
Home Number	This is the home device number of the contact person.
Mobile Number	This is the mobile device number of the contact person.
Office Number	This is the office device number of the contact person.
Fax Number	This is the fax number of the contact person.
IP Address	This is the IP Address of the device of the contact person.
Ring Tone	This is the Ring Tone selection for the contact person. To create custom ring tones, users must select the Ring Tone that will identify calls from this contact.
Address	This is the Address of the contact person.
E-mail	This is the e-mail of the contact person.
Speed Dial	This is the speed dial index. The index should be between 1 and 99. If the speed dial is required the subscriber must dial the speed dial index followed by "#'.

5.1.13. Distinctive Ring Tone Configuration

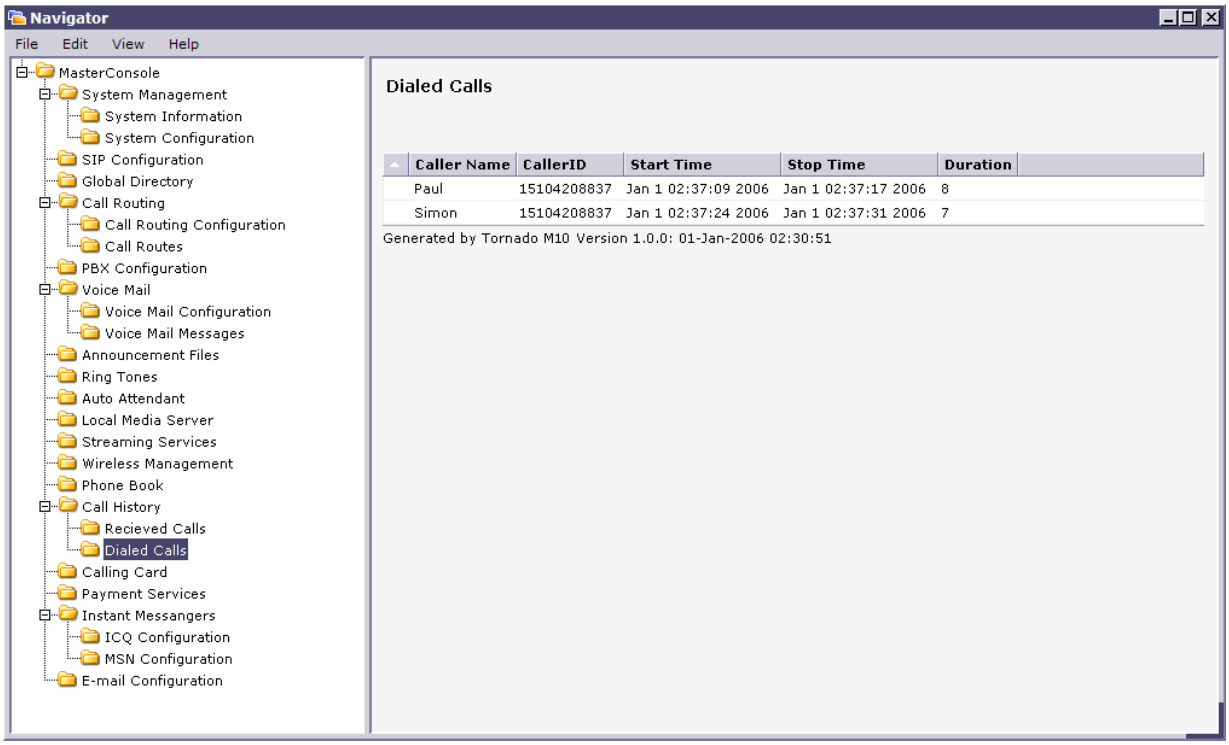
Depending on the model of TVBOX KM150 purchased, the Distinctive Ring Tone function may not be available. TVBOX KM150 can support advanced Distinctive Ring Tone management functionality to allow easy configuration of inbound ring tones based on contact profile in the Phone Book. Users can upload up to 20 ring tones. The system allows only ring tones that are recorded in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law files with *.au extension. . To delete a Ring Tone entry, select the entry and then click on "Edit" and then "Delete". Click on the left end of the line to open the Ring Tone Configuration dialog.



Ring Tone	This is the Name of the Ring Tone. This name also is used for Phone Book entry selection purposes. The system allows only ring tones that are recorded in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law files with *.au extension.
Download File	Pressing the DOWNLOAD button the users can download the existing ring tone onto their computer.
Upload File	Pressing the BROWSE/UPLOAD FILE buttons the users can upload an existing inbound ring tone from their computer into the TVBOX device. The system allows only ring tones that are recorded in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law files with *.au extension.
Upload Default	Pressing the BROWSE/UPLOAD DEFAULT buttons the users can upload a default inbound ring tone from their computer into the TVBOX device. The system allows only ring tones that are recorded in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law files with *.au extension.
Upload Outbound	Pressing the BROWSE/UPLOAD OUTBOUND buttons the users can upload a default outbound ring tone from their computer into the TVBOX device. The system allows only ring tones that are recorded in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law files with *.au extension.
Delete File	Pressing the DELETE button the users can delete the existing ring tone.

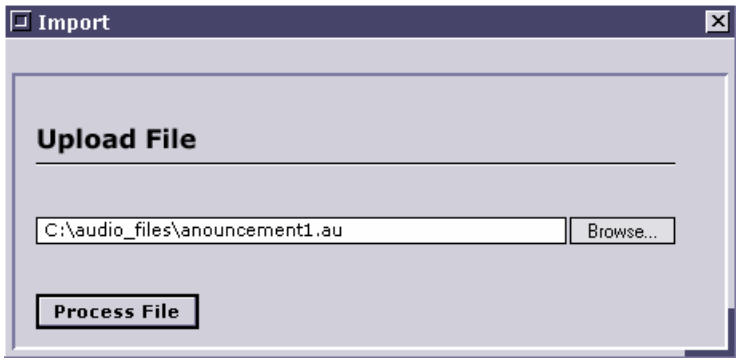
5.1.14. Call History List

Depending on the model of TVBOX KM150 purchased, the Call History feature may not be available. TVBOX KM150 can support advanced Call History List that displays all dialed numbers, received inbound calls and viewed content objects. This is a View-Only form. If the Caller ID button is pressed, the system will open the Phone Book Entry dialog to allow the proper contact information to be modified and stored as a Phone Book Entry. Click on the left end of the line to open the Call History Configuration dialog.



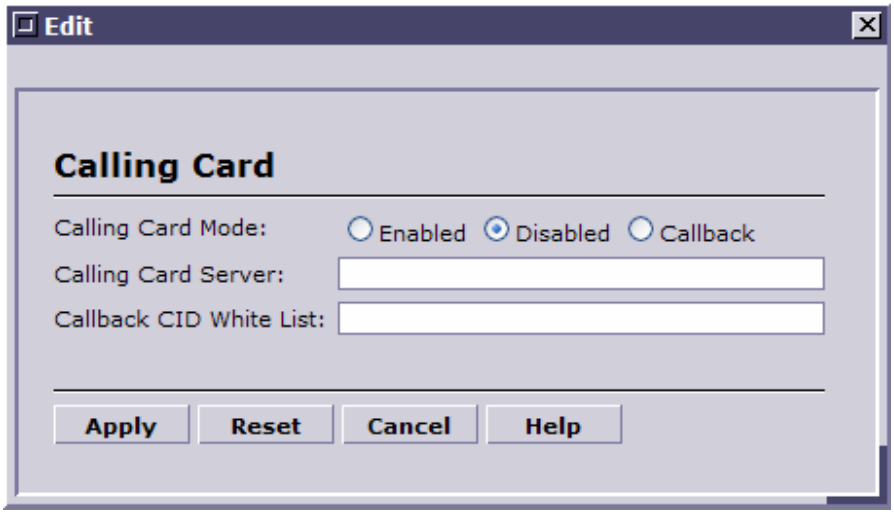
5.1.15. Announcement Files Configuration

Depending on the model of TVBOX KM150 purchased, the Announcement function may not be available. TVBOX KM150 can support advanced Announcement File management functionality to allow multi-language support and easy customization for the IVR files in the system. Users can record their own files in 8-bits, 8000Hz, Mono, Nextsun PCM Mu-law format with *.au extension. Once recorded the files can be uploaded and will be permanently stored in the IVR system. The Voice-mail Announcement Files are managed via the Web. The menu will allow UPLOAD and DOWNLOAD of pre-recorded audio files to create custom IVR environment.



5.1.16. Calling Card Application Mode

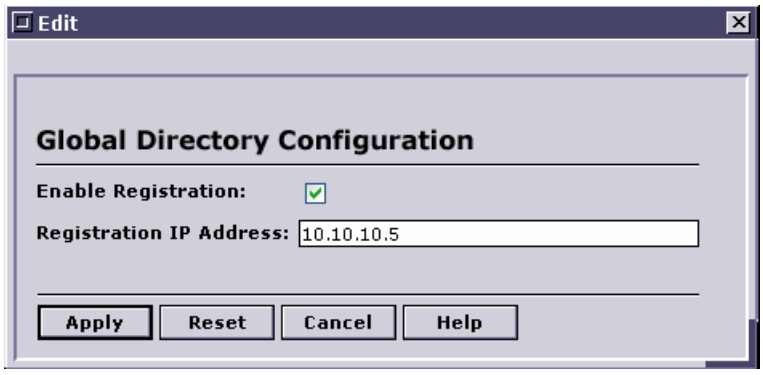
Depending on the model of TVBOX KM150 purchased, the Calling Card function may not be available. TVBOX KM150 can support advanced Calling Card functionality to allow easy and fully automated calling card function suitable for automated call shop and other pre-paid device applications. Using the below form administrators can enable the Calling Card mode of the device. Once the Calling Card mode is enabled the subscribers will need to enter a PIN code to authenticate before they can dial any number. Radius Authentication, Authorization, and Accounting (AAA) is done automatically utilizing a VoIP billing server such as the VoiceMaster server. The administrator must check the Enable Calling Card checkbox, enter the IP address of the Billing server into the Calling Card Server text box, and then press the SAVE button. Once the SAVE button is pressed the system will start working in a Calling card mode.



Calling Card Mode	Enables or Disables the Calling Card IVR. Also allows the device to function in callback mode whereas once the call is received from an authorized number, the device will callback this number and process the call.
Calling Card Server	This is the IP address of the server that will authenticate and authorize the calling card entries.
Callback CID White List	This is the list of Caller ID numbers that the device will accept and process callback requests from. If a call is received from such number the device will produce a busy signal and then call back the number within 10 seconds. The list of numbers should be comma delimited.
Apply	Saves the changes to the form.

5.1.17. Global Directory Configuration

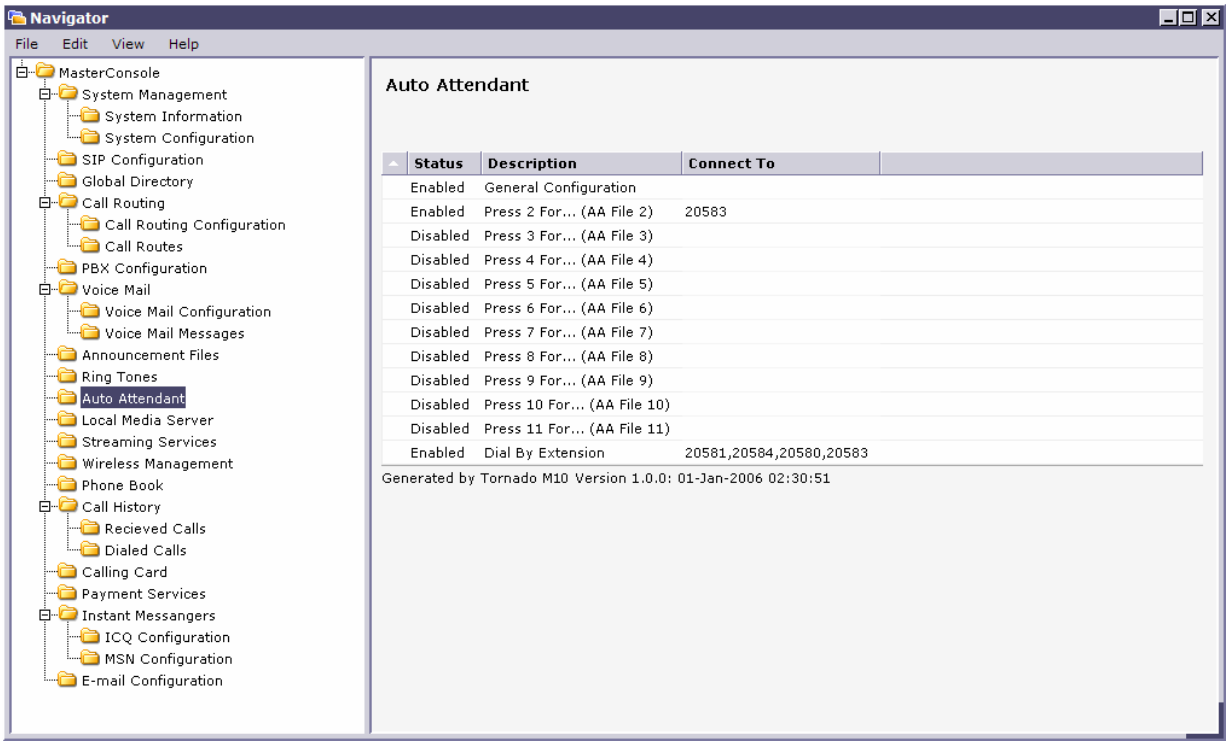
The Global Directory function allows all TVBOX KM150 devices to register into one global directory provided by the subscriber. This way all subscribers can make free phone calls within the Global Directory community.



Enable Registration	Enables and Disables the Global Directory function.
Registration IP Address	This is the IP address of the Global Directory server.
Apply	Saves the changes to the form.

5.1.18. Auto Attendant/Virtual Configuration

Depending on the model of TVBOX KM150 purchased, the Auto Attendant/Virtual Office function may not be available. The Auto Attendant/Virtual Office function allows advanced virtual office services. The device will accept incoming calls, provide IVR auto attendant services, and allow subscribers to setup their specific Virtual office requirements.



Virtual Office can be setup to allow different types of interaction and call processing. In addition, the "Connect To:" numbers support call hunting with entering multiple numbers separated by comma.

Description	This is the description of the Auto Attendant message.
Enable	This is the status of the Auto Attendant message. If checked the messages will be played in Auto Attendant mode.
Connect To	This is the number that the call will be routed to once the selection is complete.
Apply	Saves the changes to the form.

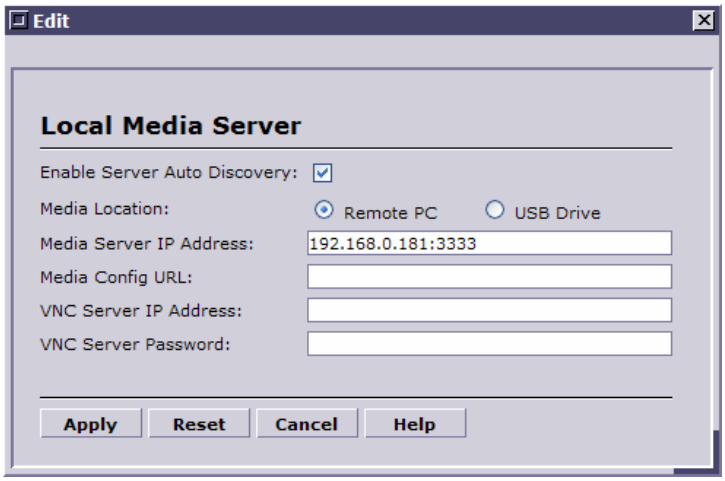
General Configuration of Auto Attendant:

Enable Auto Attendant	This function allows the Auto Attendant to start once a call is

	received.
Business Days	These are the days that the Auto Attendant will answer call and direct selections.
Business Hours	This is the hour selection for the time period the Auto Attendant will process calls.
Apply	Saves the changes to the form.

5.1.19. Local Media Server

Local Media Server functionality allows subscribers to use their TVBOX device to read and write file to remote computers running Digital media Software for Windows. The results of this function are displayed in the User sections such as the User Video, User Audio, and User Picture sections. The function allows the device to act as a DVR/PVR unit and perform dynamic recording of Video and Audio content. The function allows the device to connect to the DMC server and process files.

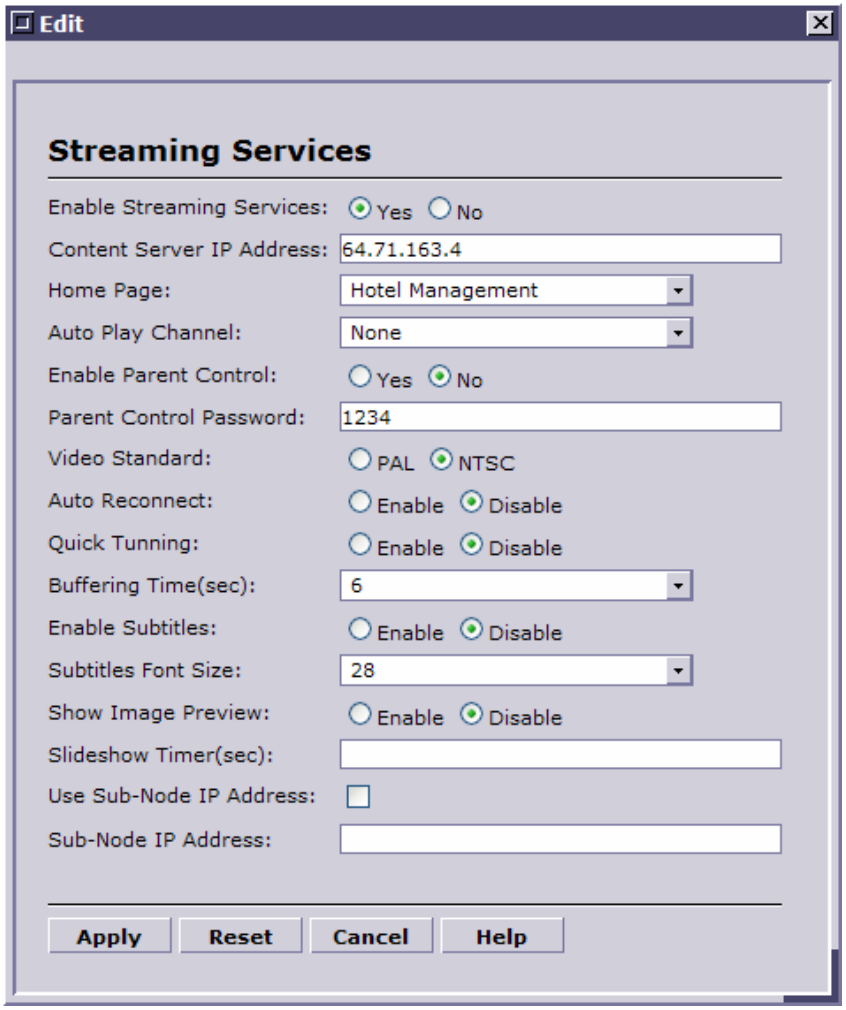


Enable Server Auto Discovery	This function allows Digital Media Center server auto discovery. If enabled, the device will accept DMC broadcasts and link automatically to the DMC server.
Media Location	This function allows the device to point its DVR/PVR function to different media to read and write files. If set to 'Remote PC" the device will read and write files to the DMC desktop. If set to 'USB Driver" the device will read and write files to the USB drive.
Media Server IP Address	This is the IP address of the media server that has DMC software running. If the server has a custom port the address should be specified as DMC_SERVER_IP:PORT
Media Config URL	This is the URL of the configuration files that has the index of local and remote content objects. The device will use the information located in the index file with extension AVH. The format of the AVH file should be: NAME|TYPE|SIZE|LOCATION|DESCRIPTION| **For example:** Movie 1|AVI|1.2G|http://205.164.40.177/a.avi| Movie 2|AVI|600M|http://205.164.40.177/a1.avi| Jazz|MP3|N/A|http://64.236.34.67:5190/stream/1010|Smooth Jazz|

VNC Server IP Address	This is the IP address of the VNC server that the subscriber will connect to. The VNC/Desktop Sharing is used for telecommunication and remote management.
VNC Server Password	This is the password of the VNC server. If configured, the password is submitted automatically. If not configured, the subscriber must enter it manually once they use the VNC Communication function.
Record Directory	This is the IP address and the directory that will be scanned and used to save the recorded files.
Apply	Saves the configuration changes.

5.1.20. Streaming Services

Streaming Services functionality allows subscribers to use their TVBOX device to provide Video, Audio and other media services. The Streaming Services configuration allows easy service configuration and simplified service management. The Streaming Services require service subscription.

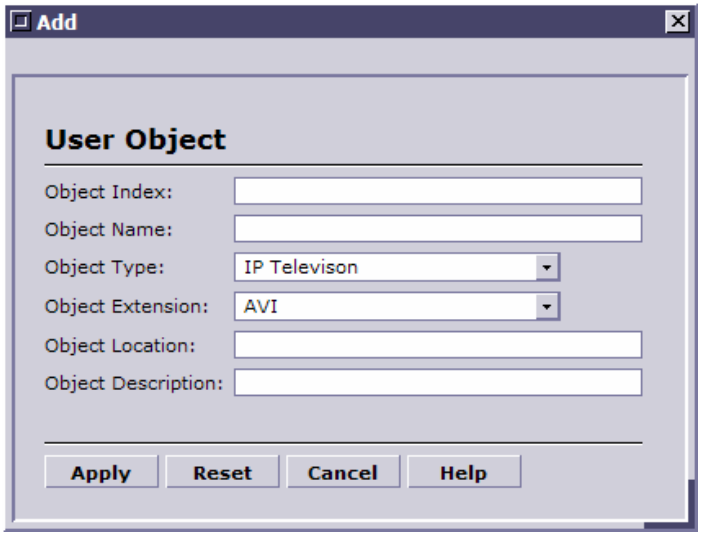


Enable Streaming Services	Enables and Disables the Streaming services for this device
Content ServerIP Address	This is the IP address of the server that provides streaming services.

	Usually this is the IP address of the SysMaster VoiceMaster streaming server.
Hope Page	This is the page that the device will access once it is initially started.
Auto Play Channel	This function allows the device to play a user defined or central channel once it is initially started.
Enable Parent Control	This function allows parent control over all provided content. For content with centrally provided adult rating, parent control is always enabled.
Parent Control Password	This is the parent control password. Parents can change the password via the Web interface or via the TV/LCD interface of the device.
Video Standard	TVBOX devices support either PAL or NTSC video standard. NTSC is usually used in North America, while PAL is used in the other parts of the world.
Auto Reconnect	This function will make the device to reconnect if the connection between the device and the server fails.
Buffering Time	This is the buffering time in seconds. Buffering is required for all TCP connection to ensure the good quality of the reception even in bad network conditions.
Enable Subtitles	This function will enable subtitle support if the provider of the service sends subtitles for the selected channel.
Subtitle Font Size	This function allows management of the subtitle font size.
Show Image Preview	This function will enable image preview while browsing for PICTURE content only.
Slideshow Timer	This parameter will define the timeout between picture changes while Pictures are in play/preview mode. This parameter is relevant for PICTURES only.
Quick Tuning	Allows quick channel tuning. Once the channel is changed the system will automatically tune to it, instead waiting for user prompt.
Use Sub-Node IP Address	This will enable sub-node usage to support UDP multicast to unicast stream conversion.
Sub-Node IP Address	This is the IP address of the sub-node.
Apply	Saves the configuration changes.

5.1.21. User Objects

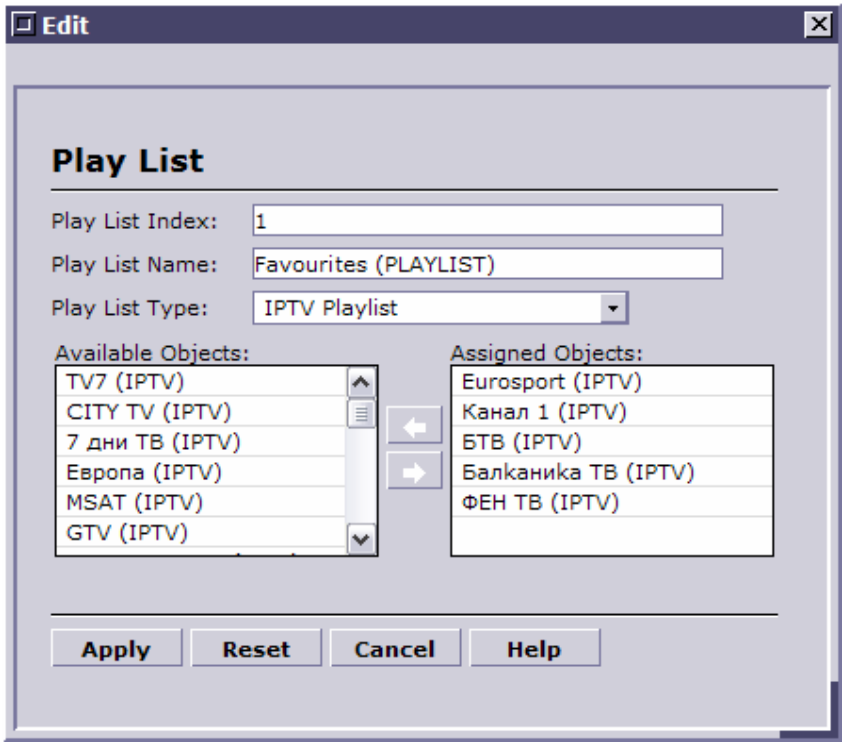
User Objects functionality allows users to define their own objects. The defined objects will appear in the User selections of the IPTV, VOD, PPV, and Audio sections of the device interface. For example, user can define local files on this USB Driver or remote files on the Web (example: usb://file.avi or http://server_ip/media.mp3)



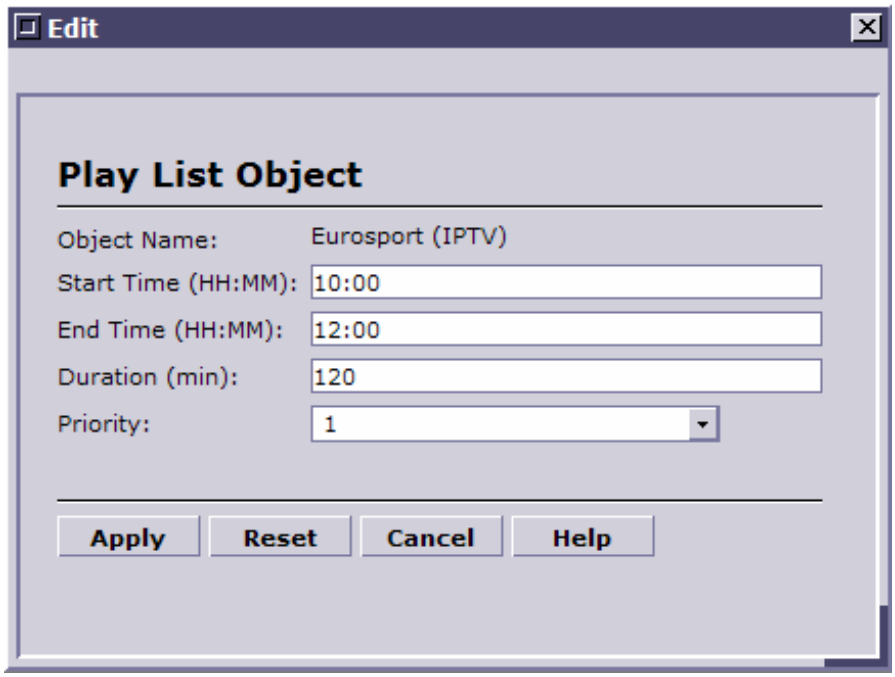
Object Index	This is the index of the object. The index is used to allow easy sorting of the object in the user section.
Object Name	This is the name of the object that will appear in the User list.
Object Type	This is the type of the object. Based on the type the object will appear in different objects lists such as IPTV, VOD, etc.
Object Location	This is the location of the user-defined object. The location can be local (on the USB or SD Card) or remote (on the remote web server). To access local objects point to their location using the following format: For USB Drive: /usb/file For SD Card: /mmcsd://file For Web: http://server_ip/file
Object Duration	This is the time in seconds that the object will be played. If the value is '0' then the object will play until its end.
Apply	Saves the configuration changes.

5.1.21a. Play Lists

User Play Lists functionality allows users to define their own play lists of objects. The defined play lists will appear in the selections of the IPTV, VOD, PPV, and Audio sections of the device interface.



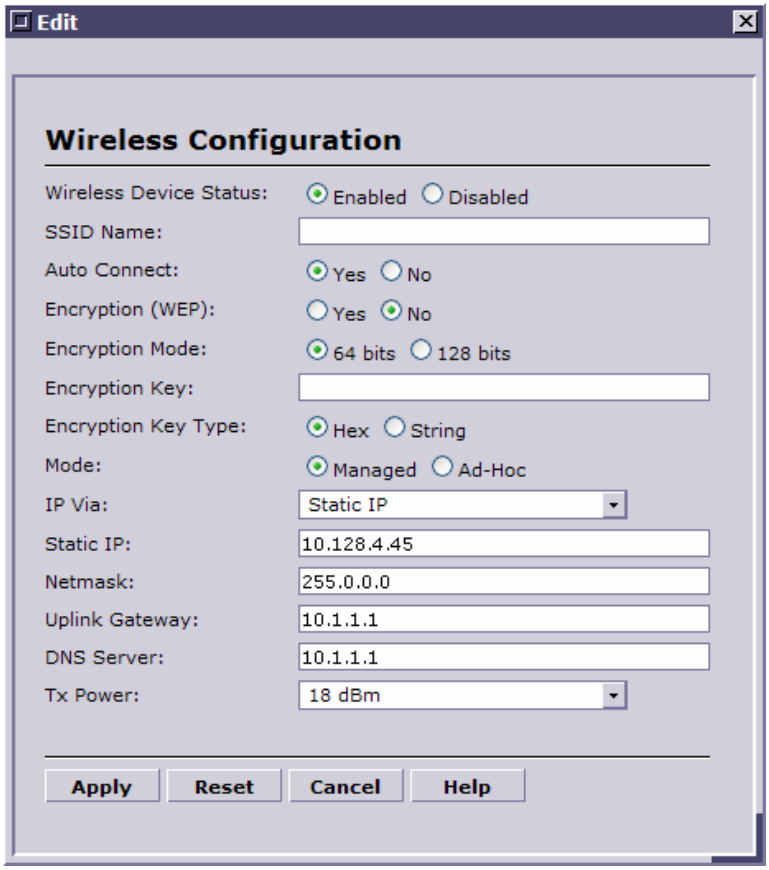
Play List Index	This is the index of the play list. The index is used to allow easy sorting of the play list in the media section.
Play List Name	This is the name of the play list that will appear in the media section..
Play List Type	This is the type of the play list. Based on the type the play list will appear in different media lists such as IPTV, VOD, etc.
Assigned Objects	These are the objects that are assigned to the play list.
Apply	Saves the configuration changes.



Start Time	This is the start time of the object in the play list. The object play can start at a pre-defined time or run sequentially. The start time of any object will take precedence over sequential object play.
End Time	This is the end time of the object in the play list. The object play can stop at a pre-defined time. The end time of any object will take precedence over sequential object play.
Duration	This is the duration of the object play. Once the duration limit is reached the object is stopped and the next object is played.
Priority	This is the object play priority. Priority numbers identify the object play sequence. For example is an object has a priority of '0 then it will be played first, followed by the object with priority of '1', etc.
Apply	Saves the configuration changes.

5.1.22. Wireless Services

Depending on the model of TVBOX KM150 purchased, Wireless Services may not apply. Wireless Services functionality allows subscribers to manage the Wireless peripherals of their TVBOX KM150 device. The TVBOX supports optional Wireless devices that can connect to a remote 2.4GHz WIFI Access Point.

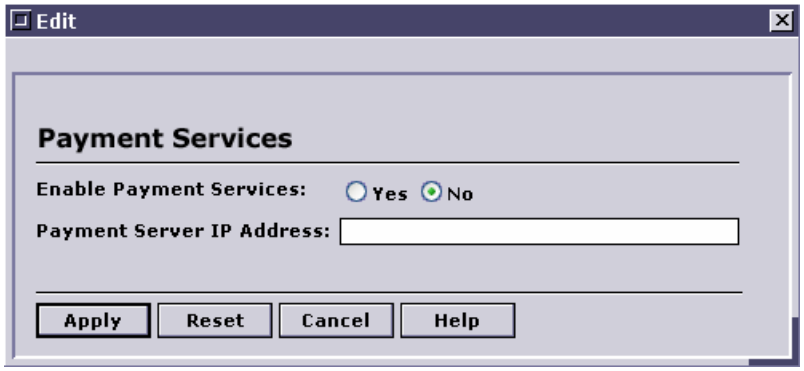


Wireless Device Status	Enables and Disables the Wireless device

SSID Name	This is the Wireless network name that will be used for uplink connection.
Auto Connect	This option allows the device to auto connect to the selected SSID.
IP Via	This defines the method that will be used to acquire IP address. There are two options. DHCP option allows the IP address to be acquired dynamically. Static IP allows the IP to be assigned explicitly.
Static IP	This is the static IP Address of the device. This IP address will be ignored in the DHCP Server selection is enabled. The Static IP address will still be saved in the memory.
NetMask	This is the Network Mask for the Static IP address. The default value is: 255.255.255.0. This network mask will be ignored in the DHCP Server selection is enabled.
Uplink Gateway	This is the IP address of the Uplink Gateway required to connect the device to the outside network (Internet). Usually this is the IP address of the Home router or the Business NAT Firewall. This IP address will be ignored in the DHCP Server selection is enabled.
DNS Server	This is the IP address of the DNS server. The DNS IP address will be ignored in the DHCP Server selection is enabled.
TX Power	This is the Transmit power parameter. The default value is 16dbm. The maximum power parameter is 22dbm.
Encryption Key Type	This is the encryption key type. The default is hexadecimal number.
Encryption Mode	This is the encryption mode. 64bits and 128bits are supported.
Mode	This is the wireless mode. The system can either operate as a client or as an Ad-Hoc server (supports up to 6 client connections)
TX Mode	This is the transmission power mode of the device. The higher the number the more powerful the wireless transmission.
Apply	Saves the configuration changes.

5.1.23. Payment Services

The payment service is used to allow payments via vouchers to a centrally located payment server. The Payment Services require service subscription.

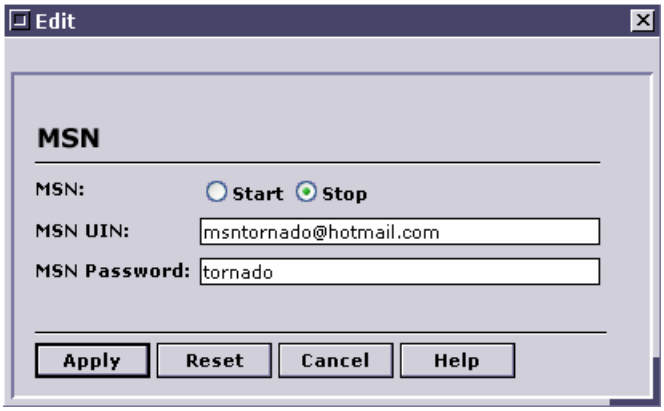


Enable Payment Services	Enables and Disables the Payment services for this device
Payment Server IP Address	This is the IP address of the payment server that will accept voucher payments initiated directly from the TVBOX device.
Apply	Saves the configuration changes.

5.1.24. Chat/Messenger Services

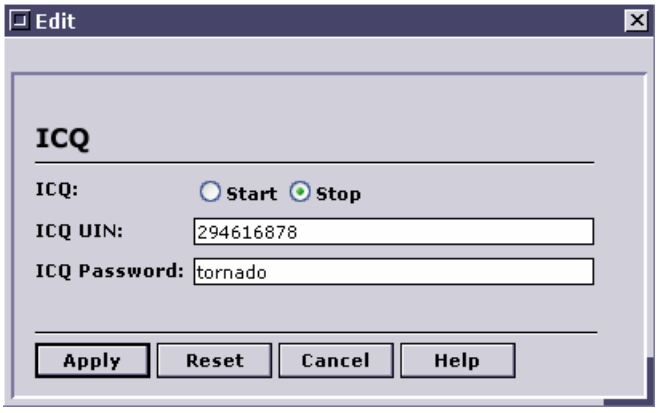
Chat/Messenger Services allow subscribers to use their TVBOX device to chat online using on MSN, ICQ, or AOL community groups. The Chat/Messenger Services require service subscription.

MSN subscribers can use the MSN configuration dialog to setup their TVBOX device to communicate with all MSN community groups.



MSN Status	Enables and Disables the MSN chat service for this device.
MSN User ID	This is the MSN User ID or Hotmail account
MSN Password	This is the MSN password.
Apply	Saves the configuration changes.

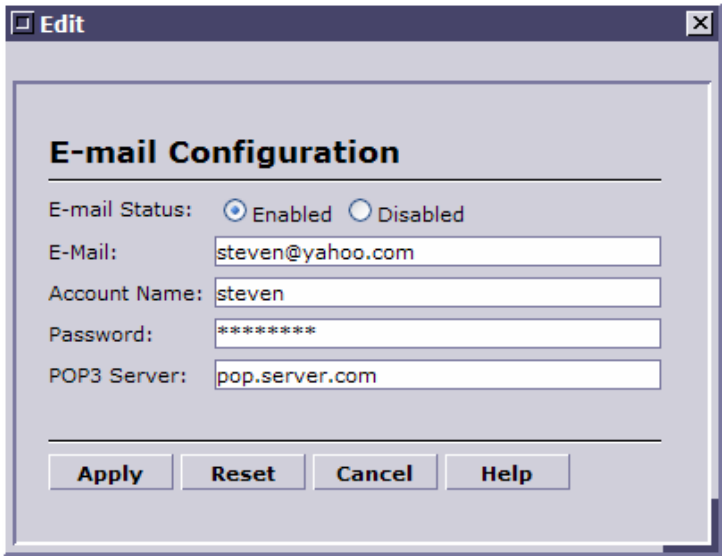
ICQ subscribers can use the ICQ configuration dialog to setup their TVBOX device to communicate with all ICQ community groups.



ICQ Status	Enables and Disables the ICQ chat service for this device.
ICQ User ID	This is the ICQ User ID or Hotmail account
ICQ Password	This is the ICQ password.
Apply	Saves the configuration changes.

5.1.25. E-mail Services

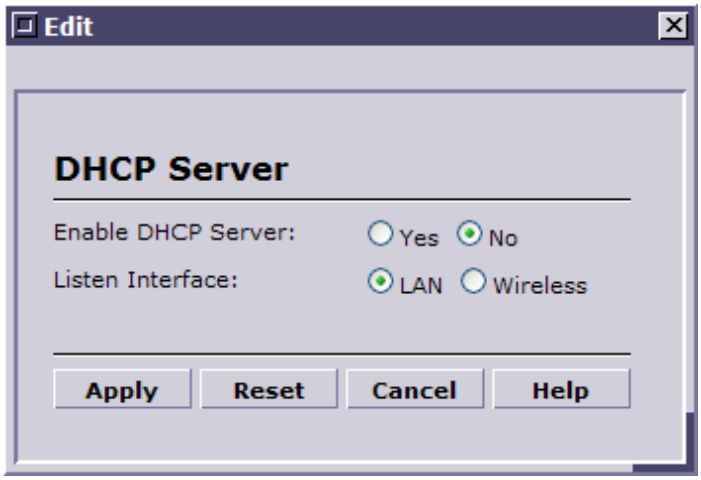
E-mail Services allow subscribers to use their TVBOX device to send and receive e-mails.



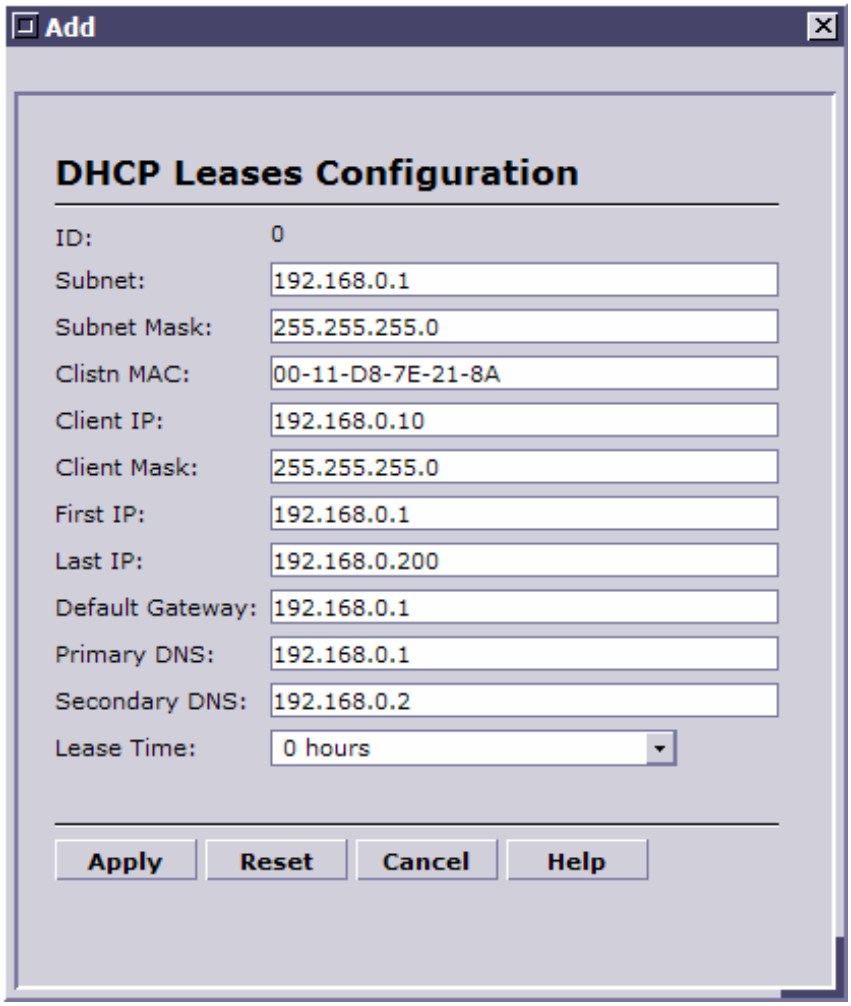
E-mail Status	Enables and Disables the E-mail service for this device.
E-Mail	This is the E-mail of the subscriber
Account Name	This is the user account name in the name server. Usually this is the e-mail part before the '@'. For example user@sysmaster.com means that the user name is 'user'
Password	This is the E-mail password.
PO3 Server	This is the IP or domain name of the POP3 e-mail server that will be used to access the e-mail. Sometimes the POP3 server name is the same as the e-mail server name. Check with your e-mail provider for the POP3 server details.
Apply	Saves the configuration changes.

5.1.26. DHCP Server

DHCP Services allow the device to function as a DHCP server for clients that use it to connect to the Internet.



Enable DHCP Server	This option allows the DHCP server to be enabled.
Listen Interface	This option defines which interface the DHCP server will listen to: LAN or Wireless.
Apply	Saves the configuration changes.



First IP	This is the first IP address to be distributed.
Last IP	This is the last IP to be distributed.
Subnet Mask	This is the network mask of the client IP addresses.
Default Gateway	This is the default gateway IP address.
Primary DNS	This is the IP address of the primary DNS server.
Lease Time	This is the lease time in hours for the IP address distribution. Once the lease time expires the IP address may be distributed to a different server.
Apply	Saves the configuration changes.

5.1.27. Home Automation (selected models only)

Home Automation Services allow the device to function as a management server for X10 power clients that are connected to the same power line within a house. The function allows the devices to be managed remotely via Web or Phone so that subscribers can access their KM150 device and power on/off different home appliances connected to X10 devices.

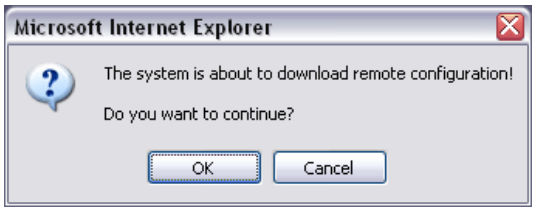
Enable Home Automation	This option allows the Home Automation server to be enabled.
Apply	Saves the configuration changes.

Picture of Home Devices

Device ID	This is the ID of the X10 client device
House Code	This is the house code of the X10 device
Unit Code	This is the unit code of the X10 device.
Device Status	This is the status of the x10 device. 'OFF' will turn off the device. 'ON' will turn on the device.
Dim	This is the light or power 'dim' parameter to allow high electrical current management.
Enable Time Control	This is the time control management.
Work Days	These are the days of the week that will make the selection enabled.
Start At	This is the start time of the selection.
Stop At	This is the stop time of the selection.
Description	This is the description of the selection.
Apply	Saves the configuration changes.

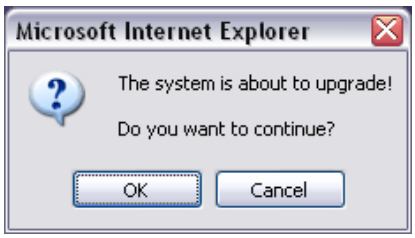
5.1.28. Remote Configuration Upgrade

TVBOX KM150 supports advanced Auto Provisioning management functionality to allow easy and centralized device management. Using the below form users can download the device configuration from the defined remote location that is stored in the System Configuration dialog. The user must select START and then press the "Get Remote Configuration" option. Once the OK button is pressed the system will request the remote configuration and automatically provision and configure itself (if newer configuration version is found on the central server). The Auto Provisioning is managed via the Web.



5.1.29. Remote Firmware Upgrade

TVBOX KM150 supports advanced Firmware Upgrade management functionality to allow easy and centralized device management. Using the below form users can download the device firmware from the defined remote location that is stored in the System Configuration dialog. The user must select START and then press the "Upgrade Firmware" option. Once the OK button is pressed the system will request the firmware upgrade and automatically upgrade its firmware (if newer firmware than the already installed is found on the central server).



5.1.30. Remote Configuration Extract

Users can reboot the device at any time without danger to the data in the configuration or the Voice e-mail files, utilizing two procedures:

1. By unplugging its power supply.
2. Using the "Reboot Device" option in the START menu. To use the Web software reboot the use must select the "Reboot Device" option and then press OK when prompted. The device will reboot automatically. After the device comes back online the user must login utilizing the standard login procedure.

5.1.31. Saving the Configuration Changes

Users can submit all changes without the need to reboot by pressing the SAVE button in all supported dialogs. The only exceptions are the dialogs that support the Remote Configuration Upgrade, Remote Firmware Upgrade, or the Reboot Device dialogs.

5.2. Remote Configuration and Firmware Upgrade

SysMaster Corporation TVBOX KM150 can be automatically configured from a central provisioning server by setting the proper Remote URL Locations in the System Configuration dialogs.

The default values for these locations are:

1. For the Remote Configuration and Auto Provisioning
http://server_ip/cgi-bin/if.cgi?run=mgetcf

2. For the Remote Firmware Upgrade
http://server_ip/cgi-bin/if.cgi?run=mdown

5.2.1. Remote Configuration Upgrade

TVBOX KM150 will attempt to contact the http://server_ip/cgi-bin/if.cgi?run=mgetcf HTTP/URL location for configuration upgrade and will attach some additional information such as its MAC address and Version number (the version number is numeric).
For example to provision itself the device will submit the following request:
http://server_ip/cgi-bin/if.cgi?run=mgetcf&mac=0004766f1d4d&ver=11

The response of the server will be the configuration file for the device based on its MAC and Version parameters. If no file is returned (empty file with name "none"), then there is a problem with either the MAC (MAC can not be found) or the Version (there is no a newer configuration version on file).

If a valid file is returned, it will have one of the following names

1. "none" - there is no newer configuration available or the MAC/Version is invalid.
2. sm_X.cfg – where X is a random alpha-numeric string that is used to encode and decode the configuration file. The Auto Provisioning utilizes RC4 and MD5 encryption algorithms that are required for secure device management.
3. sm_0.cfg – the file is in TEXT format and is not encrypted.

Service provider can use either encrypted or regular files for Auto Provisioning. SysMaster Corporation strongly recommends the usage of file encryption. If providers have an interest to implement configuration file encryption, they should send a request to their SysMaster Corporation sales representative (sales@sysmaster.com) and apply for a provider license. The used encryption is proprietary and requires that all provider that want to use encryption complete some necessary NDA and other paperwork to ensure the security of the provided know-how.

All configuration parameters that are supported can be provisioned centrally. Some configuration parameters can be later changed by users that have "user" account access. All configuration parameters can be changed by users that have "admin" account access. Usually service providers lock the "admin" account access to prevent the end-users from changing main SIP and System configuration parameters and make the device function as a part of a proprietary infrastructure.

5.2.2. Remote Firmware Upgrade

TVBOX KM150 will attempt to contact the http://server_ip/cgi-bin/if.cgi?run=mdown HTTP/URL location for configuration upgrade and will attach some additional information such as its MAC address and Version number (the version number is numeric).
For example to upgrade its firmware the device will submit the following request:
http://server_ip/cgi-bin/if.cgi?run=mdown&mac=0004766f1d4d&ver=2

The returned file will be with one of the following names:

1. "none" - there is no newer firmware available or the MAC/Version is invalid.
2. "TVBOX.Y.X.bin" – where X is a number represents the current version number of the downloaded firmware upgrade. Y represents the device type.

The returned binary file is used to upgrade the device. Once it is downloaded by the device, it will reboot itself.

5.2.3. Hardware Test Procedure (selected models only)

TVBOX KM150 will attempt to test its hardware in any mode. To start the test procedure, users must enter the key sequence *123456# using the remote control or keyboard.

To exit test mode, users must power down the device.